The Builder.

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Flaxman's Designs at Burlington House.

THE position which Flaxman holds in the world of art is apart, and by itself. He stands alone. He was not the first of sculptors, even of modern centuries, because that involves supereminent excellence in the working out of form in marble, or some other solid material; but, in sculptural design, simply, and by itself, he was absolutely the first of all time, ancient or modern.

The wide world has been somewhat slow in recognising this, for well-founded and just reputation, like the best and most enduring timber, is not of rapid growth; but every successive year now the more surely establishes this artist's pre-eminence, not only in this country, but wherever civilisation spreads; and the little meek sculptor of Buckingham-street, Fitzroy-square, takes his place in that grand group of noble English spirits which includes Newton, Shakspeare, and Milton, and some few others.

First and foremost, he was a good man, pure in spirit and life, a sincere Christian, and in religious subjects, such as those he treated from the Lord's Prayer and Acts of Mercy, his soul delighted. And yet, when, on the other hand, he applied his pencil to the illustration of classic mythology, he was more Greek than the Greeks themselves, except, indeed, it may be said that he always rendered purely whatever he touched.

His designs, for instance, from the primæval tales in the Theogony, and Works and Days of Hesiod, seem so to float in the fresh ether of the early dawn and morning of the earth, that there is nothing else in the world now like them for this delicious quality of sentiment. And if we give free way to the spirit of the dream they inspire, we hang over them with an enthralled and raptured gaze, which, for the time, shuts out, far away, the complications of present existence, and entrances us in such a classic Paradise as when Earth met Heaven, and gods and men were on colloquial terms. Such power have a few simple lines from Flaxman's magic pencil!

While contemplating, on the other hand, his inventions from the Prometheus chained, the Agamemnon, the Supplicants, and the Furies, we feel afresh the rugged power of Æschylus, and seem to hear the conflict and the wail of the early classic tragic drama, as we marvel at the stern, and fearful, and beautiful compositions which the words of the poet suggested to the susceptible mind of the artist.

The well-known designs from the "Iliad" and the "Odyssey" also are brimful of Homer,—of the imagery, and of the rhythm and march of those Greek heroic songs which tell of the siege of Troy and the adventures by sea and land of that classic Sindbad, the astute and wily Prince of Ithaca. And we delight in the vigorous conception, and life, and grace, and delicacy, and fresh originality of the compositions which so aptly, simply, and exquisitely illustrate the personages and stories of these old Greek epics.

From Bunyan's "Pilgrim's Progress," also, sufficient charming sketches exist to excite our wish to see more, for many parts of this quaint old pious fiction,—if fiction that may be called which conveys so many momentous truths,—are worthy of such simple, congenial, and ingenious illustrations as Flaxman, and such kindred spirits as Thrupp, can give it.

In the collection lately open to the public at Burlington House, and already commented on in our pages to a certain extent, none of Flaxman's designs from Dante appeared. The engravings from these, however, are usually to be found in art libraries, and many of them are of extreme beauty. Appropriately they were designed in Italy, during the seven years the sculptor resided there. Yet, although the "Divina Commedia" is religious in theme and character, it may be conjectured that the spirit of the sculptor did not vibrate strictly in harmony with that of the Italian poet, as it may be recognised that he was most happy in those sacred compositions which he independently designed, direct from the promptings of Holy Writ.

The late selection consisted wholly of original drawings, sketches, and designs, by John Flaxman; and to the sensitive lover of this artist's work there was much satisfaction in perceiving that, for the most part, the compositions pre-eminent among them were those which have been already engraved and revealed to the public, and also that they have been thus translated in a decent and faithful spirit by Blake, Peroli, and others.

There were, however, among the number displayed on the walls and screens, many gems of design, unexpected in composition, and exquisite in fancy, that have not, up to the present, been engraved and published, but which would well assist in giving novel interest, by way of illustration, to some fuller record of their author's life and labours that has as yet appeared. It would be superfluous to indicate especially any of these comparatively unstudied thoughts, inasmuch as those visitors who truly love Flaxman will have selected best for themselves those they preferred to contemplate, in which respect also the collection offered a fertile field for exploration as well as enjoyment.

Interesting, however, and various as were its contents, it by no means comprised even the larger portion of the designs of Flaxman, of which many, wholly independent of these, are to be seen at the London University College in Gower-street, in the shape, chiefly, of models and *rilievi* of the colossal, life-sized, and reduced proportions. Also in various parts of the country, as at Petworth and elsewhere, as well as in our metropolitan cathedral and minster, are to be seen noble works in marble of his design. Nevertheless, dignified and refined as are these productions, the reputation of this great artist will ever rest chiefly on his enchanting compositions in pure outline, in which province he is pre-eminent far above any other artist of any age or country. Never before or since have such magic effects been produced by so few lines; and, by their means, of all the sculptors of modern time, he is the one whose teachings have had the most power over recent art, not only in Britain, but on the Continent, where he is reverenced, perhaps, even more than he is at home. His labours and example have been of vast service to various European schools of art,—of painting as well as sculpture,—in purifying and refining them, and in illustrating how much may be done by simplicity combined with elevated fancy. In a late article in the *Globe* it was well said that "The influence of Flaxman is to be traced since in the work of men who have had more success and less merit."

In the same article also appeared some very interesting fresh details of his life, which would make us recur to the consideration that at present the world possesses no adequate biography of him. Of Blake, a great designer also in his wild but pious way, several welcome volumes of reminiscence have appeared lately, but, of Flaxman, our sculptor for all time, we have little beyond the short account prefixed to his published lectures, and we venture to suggest the theme to the literary world. So lovely, pure, and interesting a journey through this life is calculated to afford a double lesson,—an example in virtue as well as in art. It was not so long ago but that oral passages and anecdotes and recollections may be still floating, which, not yet inscribed in print, should be so ere it is too late; and as our contribution we append the following traits, which have come to us from a private source.

In the early part of this century, Nash, the Court architect of the period, was much employed by George IV., and had the control of the sculptural decorations of Buckingham Palace. In adding little figures to his architectural models, a young student of sculpture had assisted him; and the architect, being at this time in treaty with Flaxman in respect to some of the proposed sculpture, intimated to him that if his *protégé* were admitted into the sculptor's studio, he would not forget the circumstance in confirming the commissions. This led to Flaxman receiving him, which was an unusual thing at that time for a sculptor of

repute to do, without a considerable premium, which, however, was wholly remitted in this case. Some months after this time, during which the young student had been enjoying the above advantages, Flaxman, on coming into his studio one morning, at nine o'clock, which was his usual hour for commencing his daily work, addressed him in these words,—"My young friend, I received you into my studio on the recommendation of Mr. Nash, and on the understanding that I was to have certain works of sculpture to execute for the palace. Mr. Nash has not kept his promise to me; but that is no fault of yours, and it shall make no difference between you and me; and I shall be pleased to see you here as heretofore." Of which privilege, indeed, the student continued gratefully to avail himself until such time as he received independent commissions himself.

From the same source we can add, as a characteristic of the kindliness of Flaxman's disposition, that, at this time, he permitted his workmen to have subjects in marble for themselves proceeding in his studio, simultaneously with his own, although he could scarcely tell how much might be lost to the advance of his own work by the progress of theirs. Possibly they were all as upright in spirit as he was himself; nevertheless, the granting of this privilege evinced the unsuspicious amiability which was a part of his gentle nature.

Simple as these traits are, it may be well that they should not be wholly lost, and to them we will add another, which, however, has already appeared among the autobiographic reminiscences of Benjamin Haydon. In the memoranda of the year 1826, by this enthusiastic artist, occurs the following passage:—"Afterwards I called on Flaxman, who received me most kindly. I saw his 'Michael.' The head is fine. 'Mr. Flaxman,' I said, 'I wish to renew my acquaintance, after twenty years' interval.' 'Mr. Haydon,' he replied, 'I am happy to see you; walk in.' 'Mr. Flaxman, sir, you look well.' 'Sir, I am well,' he rejoined, 'thanks to the Lord. I am seventy-two, and ready to go when the Lord pleases.'" And the painter remarks on the look of sincere piety with which these words were accompanied.

Death, however, was not long in coming: for very shortly after this conversation occurred, the decease of this good and great man took place; not, however, at the age of seventy-two, which he did not live quite to attain, but in his seventy-second year, which is probably what he mentioned to Haydon. Having been born on July the 6th, 1755, he departed this life December the 7th, 1826.

THE ARCHITECTURAL LECTURES AT THE ACADEMY.

IT is a gratifying evidence of the advance of liberal spirit in criticising and studying architecture that the lectures of an architect so completely identified practically, as Mr. Street is, with Gothic architecture, should represent so catholic a tone as his Royal Academy lectures on architecture do represent. We have drawn attention lately to the predominance in the representation of Gothic architecture in the architectural elections at the Royal Academy; and our opinion is not altered on that point. But it is at least something *per contra* to find a modern Gothic architect of the most pronounced type willing to take so broad a view of the subject as Mr. Street has taken in his opening lectures, and to show so much recognition of the merits of the semi-Gothic architecture of certain periods in Italy as he has shown.

In his first lecture, delivered on February 14th,* Mr. Street not only gave to his hearers very good and liberally-minded counsel as to the manner in which the art of architecture should be regarded by those who wish to practise it or to understand it, but he touched also, whether intentionally or not, on some misconceptions in regard to the conditions under which good architecture may be or has been produced, misconceptions which have been unfortunately fostered if not suggested by very able and widely-read architectural critics, and in regard to which a word of protest comes very well in season. For example, in regard to the question how far drawing is of value in its reference to architectural production, Mr. Street evidently will have none of the criticism which represents drawing as a mere modern delusion, incompatible with the production of true and honest architecture. He points out that good drawing, as involving clear expression and delineation of features, is of great value as a training, and can, at least, have no detrimental effect on the ultimate production of the building. He disposes entirely of the idea that, because in the Middle Ages architects' drawings were like what children's drawing would be now, therefore the neglect of drawing is the surest way to build like the men whose works we now admire. "It is," as he says, and as we have often said in nearly the same words, "impossible in this respect to put ourselves in the position of men who had not our facilities and our system of education. It is true, we are not better artists than they were; but, in one sense, we can draw better, and are, therefore, bound to do so." And he makes a most useful and necessary suggestion that, in regard to the practical use of drawing, it is necessary to acquire the habit of seeing in your mind what you want to draw before you draw it. This is a faculty which the greatest artists seem to possess naturally; which may be to a great extent acquired, or at least greatly developed, by practice, but which some men seem never to acquire. This latter disability, however, we strongly surmise is due much more to indifference and to want of systematic effort than to entire inherent inability. Most men, we imagine, could acquire this habit of what may be called mental drawing, or mentally picturing the object before proceeding to delineate it, if they really try to do so. But too many students get into the habit of trusting to a trick of the pencil, and make it, in fact, design for them in a sort of "Planchette" fashion. In speaking of drawing in relation to architecture, a word was thrown in as to the importance of some study of the drawing of architectural detail by painters if they wish to introduce architecture in their pictures. The students of all classes at the Academy, it must be remembered, attend the architectural lectures, and the young painters would do well to make a note of this advice. It is impossible to represent architectural detail on a small scale in a sketch or a picture, unless the artist understands the real form and lines of such details, and knows how to represent the essential lines or features when drawing on so small a scale that much of the detail must be omitted. The power of doing this which is shown by Prout in his pencil sketches was remarked upon by Mr. Ruskin in his eccentric but suggestive catalogue to the Prout and Hunt exhibition in Bond-street some little time since. Mr. Street instances Turner in the same way, and he certainly showed the power of doing this sometimes, but at other times his architectural details are rather odd and unsatisfactory. Prout, an infinitely smaller artist, was professedly an artist dealing in the representation of architecture, and for that reason his sketches are very well worthy of study in this respect, so far as the indication of form in architectural detail is concerned; not in regard to tone and colour, in which he was a confirmed mannerist.

If it is of some value to the painter to learn a little in the province of the architect, it is of equal, or perhaps of more, importance to the architect to learn something in the province of the painter. How much this something should be is a question of some little difficulty. Mr. Street puts, again almost in words which we have often used, the dilemma that if drawing from the life is carried a very little way, it is of no service, and if more attention and time are bestowed upon it, the architect must necessarily neglect much of the absolutely essential practical part of his training, and perhaps end in becoming an inferior artist and an incompletely educated architect combined. The idea that architects as a rule should endeavour to be painters and sculptors as well is an illusion which any painter or sculptor could dissipate for them. We do not quite conclude, however, that even a moderate degree of life-drawing, such as may be carried on without the neglect of architectural education in its proper sense, is necessarily useless. It certainly assists in training the eye and hand, and it enables the architect to understand better the point of view of the sculptor and painter when he is called upon to work in conjunction with them. Moreover, even without becoming an accomplished figure-draughtsman on a large scale, it is no slight advantage and merit on the part of an architect to be able to draw in on his elevations and perspective views such figures as may be introduced as the sculptural element of the design, in an artistic manner and with the eyes of understanding, although such parts of the work may have to be turned over to the sculptor for ultimate design and execution. Our conclusion is that drawing from the life is desirable for every one who is an artist in any sense, only with the caution that those with whom figure-drawing must be only a means and not an end should bear this restriction in mind, and should neither spend a disproportionate time over it, nor deceive themselves into the belief that they are acquiring the right to compete with the sculptor or the painter on the latter's own ground. They are gaining a valuable and interesting auxiliary training, that is all.

Mr. Street strongly recommends modelling to architectural students, going so far as to say that, in his opinion, all the decorative sculpture or carving of a building ought to be modelled in the first instance by the architect. The students might reply by asking the lecturer whether he practised what he preached, because the suggestion opens a large question, which we cannot pass over. If all the decorative work should be modelled by the architect, obviously the architect must undertake nothing more than he can personally superintend and design. How will this apply to the case of men who are carrying out the great and multifarious medley of works which are now in some cases nominally designed by one architect? Obviously people who are carrying on practice on that scale could not model their decorations. A late distinguished and successful architect, whom Mr. Street regards as his teacher, complained, in his autobiography, that he had had such an amount of bad carving done for him, which had discredited him in some degree. Who was to blame but himself? Why did he allow it to be done? Simply because he undertook such a mass of work that such things as carved decoration had to be turned over to contractors to do in the lump. It seems to us that students constantly get advice in regard to the earnest thought and attention they should give to every detail of their designs from those who are manifestly engaged in far more work than they can possibly give such attention to themselves. Example is better than precept. We shall think more of this kind of teaching on the part of successful architects when we find any successful English architects willing to do what some successful French architects have done, to be content with devoting the greater part of their time to one important building, with the view of making it as perfect as possible, and to live really as artists carrying on designs personally, and not as employers of artistic labour. In one part of his first lecture Mr. Street denounces, and justly, the idea of young men taking to architecture from no real love of it, but because they are told they can make a living out of it, and points out that this is reducing the art to the level of a trade. So it is; but even-handed justice would say that such criticism would be equally applicable to some of those who, professing to be art-architects, have made their art really very like the carrying on of a successful trade in a certain class of detail, supplied from an office full of draughtsmen which constitutes a kind of manufactory for such detail. We hold this to be one of the most important points that can possibly be urged in regard to the architectural practice of the present day. The *morale* of the matter seems so plain when the inquirer comes to look into it in an unprejudiced spirit. If architecture is, as Mr. Street and others would claim for it, essentially an art, and not a mere business (and in that view we entirely concur), it should be no more right for an architect to have a quantity of work going on by proxy at the hands of draughtsmen than it should be for an eminent painter to have a number of young men painting pictures in his name, and he giving them a general look over and some finishing touches. The cases are not quite parallel, in so far as the picture is actually the personal work of the painter's own hands, and the building, the actual structure, is not the actual work of the architect's own hands; but the design for it should be so, and the details also, unless his office or studio is to be regarded merely as an art manufactory.

The general views in regard to the profession, expressed in the first lecture, are what we considered to be specially suggestive of comment: the sketch of Italian, French, and English Thir-

* All the lectures are given in our columns.

teenth century architecture in the following lectures is admirable, as every one would expect it to be, and Mr. Street's way of dealing with the subject of Italian architecture, the style of which is so foreign in many respects to his own obvious and practically illustrated sympathies, is another example of a desirable liberality of feeling in his view of his subject. In speaking of the French Mediæval architects, he puts in what is probably the real common-sense way the fact, about which so much has been said by agitators against the architectural profession, that we do not know the names of the architects or designers except in a few isolated cases. Mr. Street does not say that we may therefore conclude that the buildings grew of themselves under the miraculous consensus of gloriously-impelled working men. He only says "that the artist was so careless of everything but the perfection of his work, that it is rare indeed if we know his name, or anything about the way of his life or the manner in which he set to work at the development of his plans."

One remark in regard to a well-known building seems open to question. Mr. Street, like many other Gothic architects, holds up for admiration the independent spirit of the architect who designed the later spire of Chartres, entirely ignoring any idea of symmetry with the earlier one. This is the usual way of looking at the matter; and we regard it as mistaken in two ways. In the first place, although there is an historical interest in the present lop-sided arrangement, we hold that the symmetrical appearance of two great western towers alike in main design, though perhaps differing in minor details, is a much grander and more complete architectural effect than such a façade as Chartres presents. Secondly, we entertain hardly a doubt that the man who built the later spire would have liked to pull down the earlier one and build it the same way; and that, in fact, one object he had in building a spire of a new design would very likely have been to persuade the good people of Chartres how much superior his design was to the original, and induce them to give him a second commission.

Going back to the first lecture for a moment, we may take the opportunity of enforcing the remark which the lecturer makes in regard to the great effect of mouldings for good or bad on the building to which they are applied. He says, "Never believe any one who speaks lightly of the science or art of moulding. (I call it by both terms because it embraces both.) By no test can you separate good work from bad more surely than by the comparison of the mouldings." This is quite true and very important for architectural students to remember; and we may add that when a building is in progress it is a very good plan, besides profiling the mouldings full size, to draw them in accurately to scale on a tolerably large-scale elevation of the whole building, and thus judge of their effect in relation to one another. To another remark we may venture to put a note of interrogation, viz., that the architect, "above all men," has a delight in the past, because he can read its records in their most permanent and visibly intelligible form. In his book on "Brick and Marble Architecture in Italy," Mr. Street expressed the opinion that no one could enjoy a tour as much as an architect. This enthusiasm has its pleasant side, but it is not well that architectural students, or students of anything, should be encouraged to think that their own particular subject is the most interesting of all subjects. And in regard to the records of the past it certainly is not the case. Literature is the most valuable of all of these, and Plato and Sophocles are more to mankind than even the Parthenon. To publish this course of lectures in full we have cramped ourselves in other directions, but we are disposed to think that few of our readers who give them due attention will blame us for having done so.

Whitchurch (Chester).—Serious complaint is made of the scarcity of cottages here for labouring men. To make the matter still worse, the Local Board have given several families notice to quit their houses in Green-end, Whitchurch, by June, for improvements. Over-crowding is said to exist to a great extent, and it is urged that, if the great landowners would only dispose of some of their land in the outskirts of the town, plenty of people would buy for building purposes, to escape from the unhealthy hovels they are forced to reside in at present in the centre of the town.

THE LAW OF LIGHT IN THE UNITED STATES.

THE state of the law of light in the United States of America must be considered favourable to the views of those who advocate a change in that branch of our law in this country. At the same time it cannot be said to be as adverse to rights of light as is sometimes supposed, though it, undoubtedly, taken as a whole, places an owner of the servient tenement in a much more favourable position then he finds himself in in this country. The doctrine of the English law in regard to ancient lights is, it is said in that weighty work, Kent's "Commentaries on American Law," "not much relished in this country owing to the rapid changes and improvements in our cities and villages," since it would "affect essentially the value of vacant lots, or of lots with feeble and low buildings upon them." And Mr. Washburne, in his work on "Real Property," also points out "there is a strong tendency of the law in this country against allowing a light of right to be acquired as an easement by mere enjoyment." And there can be no question that if the tendencies of the law were not favourably regarded by the citizens of the United States, they would very soon in their State legislatures pass Acts by which the law would be altered to their satisfaction. On the contrary, so far as the State legislatures have dealt with this question, which appears to have occurred only in one instance, the object has been in direct opposition to the views of the legislature in our country. For by Chapter Ninety of the General Statutes of Massachusetts, it seems that a right to light by mere enjoyment is actually prevented. Looking more minutely into the question, the majority of the States appear to be adverse to the English doctrines, and in a recent case (Ray *v.* Sweeny) in the Kentucky Court, it is pointed out that what we may term the American view prevails in the States of Alabama, Connecticut, Georgia, Iowa, Maine, Maryland, Massachusetts, New York, Ohio, Pennsylvania, South Carolina, Vermont, and West Virginia, whilst the English doctrine is only upheld in the States of Illinois, Louisiana, and New Jersey.

The law on this subject, however, was for a long time in a very unsettled condition, and the year 1838 may be considered the time at which the tendency against the English view began to have a real force. In that year the important case of Parker *v.* Edgarton (19 Wendell, 309) came before the Supreme Court of New York, and very strong opinions were expressed by the Bench against the English law. "There is," it was stated in the judgment of the learned judge, "no principle upon which the modern English doctrine on the subject of lights can be supported. It is an anomaly in the law. It may do well enough in England, and I see that it has recently been sanctioned by an Act of Parliament [the Prescription Act]. But it cannot be applied in the growing towns and villages of this country without working the most mischievous consequences." But it must not be supposed from this that no right to light at all can be gained in America; for, putting aside an express covenant or agreement between the owners of the servient and dominant tenements, the law stands thus, as expressed in the head-note to the above case:—"To authorise the presumption of a grant, the enjoyment of the easement must not only be uninterrupted for the period of twenty years, but it must be adverse, not by leave or favour, but under a claim or assertion of a right, and it must be with the knowledge and acquiescence of the owner of the servient tenement," and this exposition of the principles of American law on this subject has been approved by the leading jurists of the United States. The mere fact that there must be knowledge *and* acquiescence on the part of the owner of the servient tenement would alone constitute a marked difference between the English and American law, &c., since a mere enjoyment of the right without interference of any sort by the owner of the servient tenement would, on the other side of the Atlantic, obviously be insufficient to found a right. To a great extent, therefore, there must be some kind of agreement between the two owners in order to create a right. Thus it is clear that English and American law on this subject has been not only becoming different, but the gap has been widening from year to year. Shortly after the Prescription Act passed, we see the case of Parker *v.* Foote, decided in a manner much opposed to the principles of this statute, and whilst the principles of this Act have been carefully enforced in England, those of Parker *v.* Foote have been equally carefully followed in America, thus increasing the distance between the two systems of law. Here, therefore, we have two nations, each starting with the same system, founded on that of the Roman law, and in most branches of their municipal law remaining closely identified, yet in this one branch differing more widely every year, affording also an illustration of the effects of national characteristics and of the peculiarities of locality upon the laws of a country, which is of far wider interest than the actual legal doctrine.

THE FRENCH GALLERY.

THE twenty-eighth Spring Exhibition at Mr. Wallis's Gallery, which opened this week, contains some very interesting works. Among these we are inclined to single out especially a picture entitled "Easter Sunday" (80) as a work of remarkable merit by a young artist whose name is not as yet much known here, Herr O. Piltz. The picture represents the gallery in some small Lutheran Church, possibly in Saxony; the spectator is facing the gallery front, and has a good view of its occupants, chiefly men, apparently men of a humble working class, in their "Sunday clothes." The church is an old low-roofed, whitewashed interior, decorated in a simple manner with flowers. At the back of the picture is seen the small characteristic-looking organ, an old and battered instrument, its white metal pipes a good deal out of the perpendicular, and the whole instrument having a strong look of "local colour" about it. But the interest of the picture is in the character of the faces. They impress us as absolutely real; specimens of human character transferred to the canvas with great insight and executive skill, and no attempt at any conventional interest. It is long since we have seen a picture by a new artist so simply and successfully natural.

Professor Müller's large painting of the Courtyard of the Doge's Palace (17), represented as occupied by figures of the time when Venice was in her glory, has the power of colour and conception which usually distinguishes this able painter's works, but with also the same comparative sombreness of tone, which strikes one more in the case of a scene of this kind, where a certain brilliancy of effect would naturally be looked for. This occupies the centre of the first wall. The next centre place is occupied by a surpassingly clever work,—the antechamber of a minister,—by M. Jimenez. This is a very elaborate and highly-wrought painting, representing the interior of a large and richly-furnished chamber, crowded with figures, whose specialties of character and circumstances are most carefully rendered, and will bear a great deal of study. The contrasted figures of a fop of the first water and a soldierlike-looking hussar in conversation, in the centre of the principal group, may be specially noticed. An old officer who is no longer a favourite evidently returns from an unsuccessful suit of some kind; in the background a robed ecclesiastic is seen, introduced into the sacred door by an official. The accessories of furniture, &c., are brilliantly painted. The third centre place is occupied by another of the stories of the Merovingian dynasty, which some French painters seem to have rather a bias towards just now, "The Last Moments of Chlodobert," who was carried on his dying bed by his parents to the tomb of St. Médard, in hopes of a miraculous cure. The mass of masonry on the right forms an effective background to the figure of the dying youth, nearly naked, on the low couch, and which is a fine specimen of figure-painting, besides being really expressive in the pathetic appearance of fading life in the features. The other two figures are not of very much interest. The painter is M. Maignan. The fourth centre picture, by M. Salmson, is also a representative of a class of paintings of which Jules Breton may be said to have been the inventor. It is entitled "Les Batteurs d'Œillettes en Picardie" (171), and represents, of course, some strong rough-looking women engaged in their task, the only other elements of interest being a flat sandy expanse of land and the bundles of "œilettes." Pictures of subjects of this class, treated realistically, may be, and have been, made most interesting; but in this case the figures seem to us almost entirely devoid of interest. What is wanted to render such a sub-

ject a really expressive work of art may be recognised by turning to the remarkable little painting by Billet (42), "Waiting for the Fishing-boats." The elements of this are even simpler: a rude-looking rustic girl seated on the seashore, with a pile of packages behind her, the wide level shore and the distant sea, with the expected fishing-boats dotting it,—that is all; but the figure is full of character and suggestiveness, and the way in which the whole elements of the scene are combined into the expression of the peculiar feeling aimed at by the artist renders this what critics of a certain school would call, we suppose, the most "subtle" work in the collection, and for once the word would be suitable enough.

Among other works of special interest in the exhibition may be noted two very fine life-size portraits of Prince Bismarck and Count Von Moltke, by Herr Franz Lenbach. There is a curious and not satisfactory Corot, called a "Lady at her Toilette," being in fact a Corot landscape with some figures forming a more prominent portion of the composition than figures generally formed in Corot's pictures, and which (the "Lady" especially) go to show that the painter's judgment in confining himself mostly to small and unimportant figures, in his beautiful landscapes, was a correct one. Among the small military subjects which are usually found here, "The Attack" (123), by E. Médard, is very clever and real, so are Sell's two small works "Bringing in the Prisoners" and "Reconnoitring" (70, 72). Seiler's "Combat à Outrance" (167), where a party of gallants regaling themselves at a table are disturbed by a messenger presenting a cartel on the point of his sword, should be looked at; the expression and attitude of the gentleman to whom the challenge is presented are admirably characteristic. "The Artist's Studio," by G. Kuhl (50) is a good specimen of its style, brilliant and telling, though rather "splashy," painting of an interior, with several figures very effectively grouped. A small and very sketchy work by Madrazo, "Lieder ohne Worte" (52), is exceedingly clever; the artist shows, in fact, to better advantage in this kind of work than in larger and more finished paintings. "Couleur de Rose," by C. Kiesel (2), is a slightly vulgar but very brilliant painting of a richly-dressed young lady looking at a picture; there is a great deal of "go" in it. Munkacsy is represented by what appears to be a study for his remarkably brilliant painting of "The Two Families" in last year's Academy; it is not equal in force and character to the finished painting. Israels is represented by a small work resembling a good many others of his in *motif* and composition. Chevilliard is splendid in his little painting entitled "La Critique est aisée, mais l'Art est difficile" (199), which represents two priests (of course), one of whom has been putting the finishing touches to a painted episcopal statue, and stands at a little distance to see the effect of his work, with a most absurd face and attitude. A small painting of two cart-horses, "Unkempt and Uncared for" (183), by A. Schreyer, shows qualities of unusual interest in paintings of this class: it is almost pathetic. A small study of "A German Lady," by Kaulbach, and one of "A Cairene Girl," by Professor Müller, are very good. Among the landscapes there is the inevitable Munthe, of course (and long may he be inevitable, for his art is perfect as far as its range goes); and two very fine landscapes by Heffner (7, 28), not, however, equal to his wonderful work, "A Gleam of Sunlight," which attracted every one in a recent exhibition in the same gallery. There are other works well worth attention which we have not space to mention. The exhibition is one of the best that we have seen in the Gallery for some seasons.

We may observe that it would be a convenient addition to the catalogue if to the list of artists' names at the end the numbers of their respective works were also added. Even in a small collection it is not always easy to find a particular artist's work without this assistance.

A Telescope for Vienna.—The great refracting telescope, constructed by Mr. Grubb, of Rathmines, Dublin, for the Austro-Hungarian Government, and which is to be placed in the Observatory at Vienna, has been completed, and approved of by a commission appointed by the Government. The new observatory in which it is to be placed was illustrated and described in the *Builder* not long ago (pp. 281, 283, *ante*).

ROYAL ACADEMY LECTURES ON ARCHITECTURE, 1881.*

BY PROFESSOR G. E. STREET, R.A.

Thirteenth Century Architecture: England.

MY concluding lecture is to be devoted to our own national architecture in one of its very best periods. No educated Englishman can be otherwise than proud when he thinks of the work his countrymen did all over England at this time. It was in almost all respects a truly national work, since its developments were distinct from and unlike those of all other countries,—and, I think, little, if at all, inferior to the very best of them. Just as in dealing with Italy and France, we shall find it necessary to review shortly the state of architecture in England before the thirteenth century, and the changes consequent on the invention of the pointed arch. You know, probably, that we have in this country a number of buildings (churches) in various parts of England which have such distinct and marked characteristics that they perfectly admit of exact classification, and are in almost every particular unlike any of those which we know to have been built since the Norman Conquest. Their plans, with the one exception of the church at Brixworth, have square ends, not apsidal. Brixworth is probably a Roman work, and has all the evidences in plan and elevation that might be looked for in such a case, and is not really, therefore, an exception to the rule. These churches generally have masonry with long and short quoins alternately at the angles. Their walls have narrow pilaster strips at intervals. Their doorways are generally enclosed with a narrow projecting line of stone, which rises from the ground and encloses the whole archway. Their towers are generally lofty, and have belfry windows divided by rude baluster-shafts; but where, as at Earl's Barton and Barton-on-Humber, the towers are enriched, it is with a system of arcading or panelling all over the walls, which is like that which I have described to you as existing at Ancona and elsewhere in Southern Italy,—a system of unmeaning decorative stonework clapped on against the face of the walls, with no reference of any sort to their construction. I show you side by side a drawing of the arcading on Barton-on-Humber Church, and on the front of Sta. Maria, Ancona; and you will see at once that the similarity in the system of decoration is so exact as to deserve special notice. In the same way, I have made two parallel elevations of a window from St. Mary Bishophill Junior, at York, and from the Cathedral of Ravello, near Amalfi. You will see here, again, that the elements of the design are all but identical. At the same time, it is to be observed that in the whole of these buildings there is hardly a trace of distinctly Roman influence on the design. The transept arches of Britford Church, near Salisbury, may perhaps be excepted, though even here, in combination with a singularly good and very perfect decorative panelled arch in stone and tile, the arches have the narrow outside stone border which I have learnt to regard as one of the most distinct marks of Saracenic architecture in the South of Europe, as it is of the pre-Norman architecture of England. One thing at least is clear, viz., that English art at this time owed nothing, or next to nothing, to the Romans. At the same time, Ireland was rich in saints and in churches, and had the most intimate connexion with the British Church before the coming of St. Augustine from Rome. And in Ireland, as in England, the churches were small, generally divided into two nearly equal parts, and always finished with square rather than apsidal terminations. In Scotland, under the same influence, we see the same effects, with the solitary exception of the circular church at Orphir, in Orkney, where the special circumstances of the case account for the variation.

Before the Norman Conquest England was, therefore, provided with churches which had, so far as we can see now, few marks of any sort of connexion in style with those of France or Germany. At the time of the invasion, you know, from what I have already told you, that in almost all parts of France the apsidal east end was all but universally adopted; and what happens after the Conquest is equally significant and interesting. The Normans came over and evidently, as all conquering people do, brought their art and their architects with them. Then our English monasteries had a most intimate connexion with French monasteries, and nothing is more common than to find a monk sent from Cluny or some other great French convent to become head of an English house, such as Fountains Abbey, or others of almost equal importance. Each of these men, too, brought the latest fashions, and as far as the English prejudices would allow, imported them in some degree into his new work. In no respect is this more evident than in the substitution by the Norman builders of apsidal east ends for the original English square ones. The examples in which either these apses remain in part or in whole, or in which their foundations have been discovered, are the following among our cathedral churches: *Canterbury*, an apse with a circular chapel at the east end, built or rather begun on very much the same lines as Sens Cathedral by a French architect, William of Sens; *Winchester*, an apse with an aisle and chapels round it; the cathedral at *York*, built after the Conquest by its first Norman prelate, Thomas, had no doubt three or even five Eastern apses, a fragment of the wall of one of these under the transept being still *in situ*; *Lincoln* not only had three apses built by its first Norman bishop, Remigius, but, as far as can be made out from the small remains below the stalls and pavement, a second apse erected by St. Hugh, of Avalon, between 1186 and 1200, as well as the still remaining apsidal chapels to the eastern transepts; *Peterborough* had an apse and probably aisles finished in the same way; *Gloucester*, an apse with an aisle round it, three apsidal chapels, and one to each transept, the whole following exactly on the lines of Notre Dame du Port, Clermont-Ferrand, and the numerous similar French chevets; *Worcester*, an apse with an aisle round it, and doubtless chapels; *Norwich*, an apse, with surrounding aisle and chapels, and two to the transepts, on the same lines as Canterbury; *Durham*, chapter-house apsidal, and choir in all probability so also; *Chester*, a short apsidal choir. With the exception of Canterbury, almost every one of these cathedrals has had its eastern end greatly modified or wholly altered in the thirteenth and following centuries; and everywhere, with the rarest exceptions, the later architects returned to what was the old and well-loved shape of the eastern limb of the cross before the Norman invasion. The apsidal termination to a church in England is, in fact, a distinct mark of foreign influence, and the universal objection to the form,—for it is nothing short of this,—on the part of the English at subsequent periods is, I believe, entirely due to the reviving national liking for what was consecrated in men's minds as their own national form. This was a perfectly natural thing if you consider for an instant the state of affairs. After the Conquest it is hardly too much to say that every bishopric and every abbey had forthwith imposed on it a French or Norman bishop or abbot. These, together with the foreign laymen entrusted with local commands, were the officers who were to keep the country in due order, and to take care that the Norman supremacy was not disturbed. Many of the bishops and abbots could not speak English. Everywhere they found the churches I have referred to existing. Usually these were insignificant, or, at any rate, not magnificent buildings. They had wooden roofs and ceilings. Sometimes they were thatched, sometimes built wholly of timber, and sometimes of wicker-work,—as in the famous case of the chapel which stood on or close to the site now occupied by St. Joseph's Chapel at Glastonbury,—which was a structure of twisted rods or hurdles, covered in the seventh century by Paulinus, archbishop of York, with boards on which he laid "lead from the top to the bottom."

The foreign bishops naturally introduced foreign architecture, and foreign architects. Their churches had nothing whatever to do with those which had existed before, for these were a local development from, though with but little evidence of likeness to, the Roman buildings which had been scattered throughout the country during the Roman occupation, or else rude native copies of the basilicas which the British bishops had learnt to admire and venerate in their visits to Rome. The new churches were, in fact, almost complete repetitions of the churches which had come to be built in Normandy as the result of the long train of development in French architecture which had culminated in the art of the eleventh century.

* Sixth and concluding lecture of the course, delivered on Thursday, March 3. (For previous lectures see pp. 202, 235, 265, 296, and 330, *ante*.)

In course of time the English began again to assert themselves. English bishops, English abbots, were appointed in place of foreigners, and with them English art made its first real mark in our country. Jocelin, bishop of Wells, and founder of the cathedral, and Hugh, the second bishop of the name, of Lincoln, were Englishmen and brothers, and commonly called Jocelin of Wells and Hugh of Wells after their birthplace. And it was at the end of the twelfth century, when Englishmen were again asserting themselves in their own country, that the invention of the pointed arch enabled them to throw off the architectural yoke of the Normans, and develope a style for themselves, one of the features of which was, in regard to the ground plan, a return to our own national form of square-ended church.

Whether I am right or not in my theory, the fact remains that with one grand exception, the whole of the great English churches of the thirteenth century were square-ended. This exception is, of course, Westminster Abbey. Here the evidence of the building itself seems to be complete that the king had resolved to build a church after the model of the great French churches, but employed an English architect to plan it, and he made his plan on lines which are distinct and different from those of any French church. Nothing is a more interesting subject for study than the adaptation of a foreign plan and design by an able Englishman devoted to his national art, but it is somewhat outside my subject to-night. All of us are proud of our beautiful minster; we all feel it is no dry repetition or copy of another building; but, at the same time, it is impossible to regard it as being a fair example of a purely English church. Some years ago, I believe that I proved to demonstration that the architect of Westminster built also, and at the same time, the beautiful church at Stone, in Kent. The arcades round the eastern portion of both churches, the detail of much of the ornament, and the character of the window tracery and of the clustered columns in the two churches, are to a large extent identical, and where they are not absolutely so, they are so nearly alike as to make it evident that they were designed by the same hand. The proportions of both churches are similarly designed on the equilateral triangle, and the materials used are the same. The interest of this smaller work is great, therefore, as showing that directly the architect of Westminster was free to do as he liked, he built as an Englishman of the strictest kind, with no evidence in any part of his work of foreign leanings, and notably with a square east end in place of his Westminster apse.

The gradual growth of an English church is nowhere to be studied better than at Canterbury, where we are so fortunate as to have the account of the building of the cathedral by two monks, Edmer and Gervase, one of whom described the history of the church in 1130, and the other its burning and rebuilding at the end of the century, and this last saw the work absolutely in progress very much as we now have it. What happened at Canterbury gives us in a clear way an insight into what happened, much in the same way, in other dioceses. The Saxon church was probably one built, as far as outline is concerned, to a considerable extent on the lines of the Basilica of St. Peter's. St. Augustine and his successors were so distinctly identified with Rome that it would have been certain in any case that this would be so, had not Edmer's account led to the same conclusion. Archbishop Lanfranc took this church down and rebuilt it on a larger scale, finishing his work in 1130. His plan included a nave and aisles, transepts with eastern apsidal chapels, and a short choir, probably finished with three eastern apses. This church was enlarged by another archbishop in order to satisfy the desire for a large choir, which involved in so many cases the destruction of our old cathedral choirs; and in 1174 the enlarged church had arrived almost at the dimensions which it still has. It had a long choir, an eastern transept, in addition to the ordinary central transept, a great apse with an aisle round it, and apsidal chapels on either side of the main apse, and probably to the east of it also. The columns and arches were low, the aisles were vaulted, but the central portion was roofed with a wooden roof ceiled on the under side. This was again burnt in 1174, and the archbishop forthwith called in a French architect, William of Sens, who retained but increased the height of the columns and arches, and covered the whole choir with a stone vault above a triforium and clearstory. His successor, William the Englishman, finished the church by the erection of a second apsidal choir, with an aisle round it which was built to receive the shrine of St. Thomas à Beckett, and east of this a circular chapel, or Corona, as it is called. The whole scheme is now one of the most beautiful in Europe. The gradual narrowing of the choir before the junction of the eastern apse with the apse of Ernulf or Anselm is the result of an ingenious utilisation of the older church foundations still existing in the crypt. The same economical considerations affected the builders of many of the enlarged choirs of our cathedrals, as, *e.g*, Winchester and Gloucester, where the existence of a semicircular crypt compelled the later architect, who could not afford to destroy the whole of the foundations, to adopt some ingenious system of plan to enable himself to combine the two. At the Abbey of St. Denis, near Paris, precisely the same necessity compelled the architect to make the first bay of his choir incline considerably on plan. It is one of the charms of Gothic buildings that wherever such a necessity existed it was honestly met, as a matter of course, by some arrangement which, whilst it explained the fact on its face to every one, at the same time added to the picturesqueness and beauty of the design.

So great a work as this at Canterbury was, so magnificent in its results, would, it might have been supposed, have been followed, if not throughout the whole country, at least in the county and diocese. Strange to say, it had no followers, and seems to have produced no effect. In most dioceses we find the most general and complete architectural influence exercised by the Mother Church. The men who built this either directed or inspired all the work in the district; so that variations in design which were at first merely personal,—the fancies of some one able man,—came in course of time to be local peculiarities in which the original personal influence is no longer seen. It is difficult to account for this contrary state of affairs in the case of Canterbury. But probably the insular pride or prejudice,—call it which you will,—of the English resented the introduction of a style of building which had no connexion with and never reminded them of the ancient traditional form of the English Church. It is clear that the impetus given after the Norman invasion to the adoption of plans copied from or founded on the Norman churches soon ceased to produce effect. The great churches were most of them rebuilt in the new fashion, but not the less was there a deep dislike to the change, and a steady preference for the plan which was gradually felt to be more distinctly connected with the old times before the invasion and conquest. I am disposed also to lay some stress in this matter on the desire of Northern nations to secure the exact orientation not only of their churches, but of their altars also. The French did not feel this, and their altars arranged round a chevet face all ways. In Germany and in England, at any sacrifice almost, altars were made to face west. A singular instance of this I discovered in the crypt of Christ Church Cathedral, Dublin, where, in spite of the adoption of an apsidal termination to the choir, the three chapels to the east of it are all square-ended, so that all the altars might face the same way; and in Germany, where an apse is built with a number of altars, you will find that they are placed, without any reference to the slope of the walls of the apse, facing due west. A strong tradition of this sort may easily have been offended by the apsidal form. The subject ought to be gone into more thoroughly than I have ever seen it treated. It is one of extreme interest, and an almost unique example of a national submission to a new type of plan, suddenly changed into a determined return to the older and,—with the Conquerors,—evidently unpopular plan. Certainly, within 150 years of its introduction the use of the apse was abandoned, and almost every church in the thirteenth century in England was built with a square east end. The fact is so important, as bearing on the subsequent progress of English art, that it deserves our careful attention. You will recollect that almost all the problems which the French architects set themselves to solve were connected with the more perfect planning and designing of the chevets of their churches. They have left other magnificent examples of their skill; but it is to this part of their work that I alway find myself most attracted, and in which I am sure that they were themselves most concerned. In England, on the contrary, the prejudice against the apsidal end left the architects more free to devote themselves to all parts alike, and in the case of small churches, if the English system was less academic and exact than any can be which treats the support of stone vaults as the one great thing to be contrived, at the same time it secured an endless and picturesque variety of plan and design, in this respect excelling, in my judgment, all other countries. Observe, also, that the ingenuity of the French architects was devoted even more and more to the increase of of the height and the decrease of the apparent means for supporting their lofty churches, so that by degrees it was of the interior of their churches that they came to think most, leaving the exteriors to some extent to take care of themselves. The English architects, on the other hand, being far less occupied with these particular scientific problems of construction, devoted themselves with all the greater zeal to the developing of the detail of their buildings, and being very practical artists, never lost sight of the importance of making the exterior as beautiful as the interior. The vast height of such churches as Amiens, Beauvais, Bourges, or Le Mans, makes it impossible that the exterior should be a complete whole, from whatever point it is viewed.

Canterbury, Lincoln, Wells, Salisbury, Lichfield, and York, not to name others, are all churches in which the height is insignificant when compared with the French examples just mentioned. But they are all complete and beautiful works on the outside as much as inside. Nowhere else in Europe is so good and strict a proportion observed. The moderate height of the roof made it possible to erect towers, or groups of towers, which, without trying to attain impossible dimensions, are nevertheless magnificent works. The towers of the west front of Amiens only look like towers when seen from the west front. When seen from the side in connexion with the church, they shrink into mere turrets. Then, English architects had great common sense. They realised that the effect of size is not given by height alone. They knew that the effect of length in an interior was just as impressive; and by making the height of their buildings moderate, they immensely increased their apparent length. I remember spending a day at Amiens once, wrapt in admiration of its magnificent interior, and only wishing occasionally that the limits of the church allowed me to take in the upper part of the work, the clearstory and vaults, without lifting my head to an inconvenient angle. The next day I was at that loveliest of English fourteenth-century churches,—Exeter. I went somewhat in dread of what I should feel. But the modest dimensions of the interior, —not much more than a third of those of Amiens in height,—I found had been so used by the Englishman as to produce the effects of infinite length, of size, of mystery, of beauty, to as great a degree as the work of the Frenchman had produced them. It is the modest completeness everywhere, the variety and beauty of the detail, and the judicious adaptation of the means at disposal to the end required, that strike me as the great achievement of the English school of architects of the thirteenth century. I hope I have travelled too much, seen too much, and admired too much the great works of other countries to be a prejudiced or unfair judge of the comparative merits of their respective works. But to me it seems matter for real congratulation that the students of our art have around them in this country on all sides buildings which are in almost all respects as well worthy of study as those of any other country, whilst in some of the highest qualities they are, if not unequalled, at any rate unsurpassed.

The preference for the square plan of the east end of our churches was one only of the marked differences between English and French architects. The next in importance was the indifference of the former, save in very important works, to the use of stone vaulted roofs. This indifference led, no doubt, to far greater facility in the way of changing the form of the ground-plan,—and led to a freer and more picturesque if to a less stately and formal mode of design than the French system did.

But even more important than this difference is that which we find in the treatment of the capital by the two schools. In France, in all early architecture, the upper member or abacus of the capital is square on plan. This is the

Classical outline. It was modified at the end of the twelfth century by first taking off the angles. Then they were made octagonal, and at the end of the century a variety of angular lines were adopted; and, save in such churches as Bayeux, Coutances, Norrey, and the Castle of Mont St. Michel, the circular capital is rarely seen. These exceptions prove the rule, for the architecture of Normandy in the thirteenth century ran a parallel course with that of England, and shows very nearly the same sort of developments. Broadly speaking, therefore, it is the fact, then, that the abacus of the capital is in French architecture square, in English circular. The results on the character of the architectural details from this small difference were very remarkable. French architects satisfied themselves with few simple and very uniform mouldings. The most common of all is the edge-roll, with a hollow on each side of it,—a moulding, which at no time has very much beauty, and soon satisfies the artist as to its capabilities. The square outline of the capital seems to necessitate an equally well defined and sharp outline for the section of the arch. Broad, strongly-marked lines prevail, and comparatively little care is shown to vary the mouldings which are used. The effect of the employment of the circular capital was curiously different, and equally well marked. The general lines of the stonework of an arch which is fitted either to one, or to a succession of round capitals, are much softer and less positively defined than the former. The shadows are less strongly marked. With a succession of capitals which have a square abacus you have of necessity a succession of orders in the arch which have soffits at right angles to the face of the wall, and your mouldings are bound to keep to this outline. With a succession of circular caps all the angles have to be chamfered off, and the general line of the arch is at an angle of 45° to the face of the wall. At first sight this involves much less light and shade, and much less decided effect, and it becomes more than ever necessary to mould the stones in such a way as to produce the decided effects of light and shade which are required to make the effect of the arch perfect. Thus the circular capital leads naturally and insensibly, almost, to the development of the art of moulding, or (where mouldings have to be eschewed) to the soft and delicate chamfer in place of the strong and vigorous effects of the square abacus and square soffit in the arch. The circular abacus is seen but rarely in Norman work in England. Among the earliest examples that I remember are the cathedral at Gloucester, Tewkesbury Abbey Church, and the fine crypt under the choir of St. Mary's, Warwick; and at Canterbury one of William the Englishman's first variations from the work of William of Sens was the introduction of circular moulded capitals into his work. After his time it is extremely rare to see anything save the circular or the octagonal cap used.

Another element in the formation of our English style which has to be borne in mind is the nature of the most available stone. Undoubtedly the Caen stone-quarries exercised great influence not only in Normandy, but equally in England, to many parts of which it was cheaper to bring that stone by water than to obtain native stones by land-carriage. And to some extent, at least, the mason follows the stone. In France, Caen stone was by no means so much used. Out of Normandy it is very rarely seen; for, in truth, there it had to compete with local stones in all parts, and, as the land-carriage was a great difficulty, it was not used at any great distance. The masons who developed a style at Caen had much less effect, therefore, naturally, in France than they had in England. Their stone was used in London, in Dublin, all along the south and east coast of England, and, in short, wherever water-carriage was available. Its texture allowed of the most delicate workmanship being seen to the greatest perfection, and I think I have never seen or used a stone which seems so loudly to call on the mason to exercise his skill, wholly unlike the coarse stones which are so common in other parts of France, and which seem to make the best and most polished workmanship to some extent a waste of labour. The thirteenth-century buildings in Normandy, thanks to this stone, are extraordinarily rich in delicate mouldings, undercut with the greatest skill, and producing the most intricate and charming effects of light and shade, and in almost all respects just such as are used in our best English buildings of the same period. In England not only was Caen stone largely used, as I have said, wherever water-carriage allowed of its being easily landed, but in various districts stone was to be found which admitted of the same kind of workmanship as Caen stone. Each cathedral grew, and the best buildings were erected, in the neigbourhood of some stone-quarry, which supplied ample material. Salisbury was built from Chilmark, Wells from Doulting, Peterborough from Barnack, York from Tadcaster, and so on; and in all these cases the stone was of fine and good quality, and admitted of finished workmanship, nearly equal to that which the masons employed in the Caen district.

English architecture in the thirteenth century was launched on its course with its own national peculiarities in ground plan, in the shape of the capital, and in the practice of the art of moulding as one of the main modes of decoration to be made use of, and, at the same time, with what I am almost obliged to call an indifference to the sculptor's art. The examples of thirteenth-century sculpture are not such as one can venture to compare for an instant with those grand arrays of figure and subject with which the French churches were so profusely adorned. The west front of Wells cathedral is the finest example we have, and the execution and design of the subjects and statues here is, in many respects, admirable, justifying Flaxman's statement that "in parts there is a beautiful simplicity, an irrestible sentiment, and sometimes a grace, excelling some modern productions." Close upon Wells followed Salisbury, less fortunate, however, in that a larger proportion of the ancient statues have been destroyed or have decayed. But even in these cases the sculpture plays a remarkably subordinate part. It more or less extends over the whole front, and yet it nowhere overwhelms or interferes with the architectural lines. These are as defined as possible from the base to the summit, and are almost as predominant where there is sculpture as where there is none. Crowland Abbey,—now, unfortunately, in ruins,—the south transept of York, Dunstable Priory, the west front of Ely, had all of them sculpture introduced in the same fashion. Statues standing on corbels under arcades in the walls, and subjects carved in spandrels or in the tympana over archways, as in the north door at Salisbury and the west doorway of Higham Ferrers, are features in the decoration of all these churches. The south doorway of the choir of Lincoln is almost a solitary example of a doorway with sculptured statues on its piers, its jambs, round the orders of the arch, and in the tympanum between the arches of the doors and the enclosing arch. Even here, if you compare it with recent French work, you will be struck with the modest proportions of the whole, and with the extremely well-defined character of the architectural lines which enclose and keep in due restraint the exuberance of the sculptor. In what is, perhaps, the most poetical conception in England, the west front of Peterborough, it is not until the three magnificent arches are completed, with all their well-ordered and chastely simple array of shafted jamb and moulded arch, that the sculptor has been allowed to fill the gables and the spandrels with an array of statues in niches, capable, possibly, of some religious interpretation, but not near enough to the eye to be criticised as works of art, and only serving for the general decoration of the gables in company with rose-windows and arcades and mouldings. If, however, in sculpture used as a decoration of architecture England is somewhat wanting, this cannot be said of sculpture as applied to monumental effigies, or of the work of the stone-carver in the humbler decoration with foliage of the capitals and other members of our buildings. In these English buildings are rich, and the refined and delicate beauty which was so evident in them is equally evident in their decorations. The carving of foliage is perfect in its arrangement of the masses and in the beauty of form and line which marks every part. It has far greater variety than French work of the same date, and trusts more to perfection of treatment throughout than, *e.g.*, to the somewhat violent, if vigorous, treatment of the usual French capitals. The detail of foliage developes gradually throughout the century, from the transitional carving of St. Joseph's Chapel, Glastonbury, to the beautiful adaptation in some cases at Wells and St. David's of Romanesque outlines, or by Salisbury, Ely, Lincoln, and York till it culminates in such admirable and truly architectural treatment of natural forms as we see towards the end of the century in stone in the chapter-house at Southwell and the passage to the chapter-house at York, and in wood in the stalls of Winchester Cathedral.

It is time, now, to do as I did in speaking of French architecture, and to say something on the way in which the English architects did their work in some two or three typical examples. None, I think, are better for our purpose than Wells and Glastonbury on the one hand, and Salisbury on the other, both of these cathedrals being wells of English undefiled, and illustrating two different modes of treatment,—decoration of the structure by the shaft and column in the one, and by moulding and masonry in the other.

At Glastonbury, St. Joseph's Chapel is of supreme interest. In the delicate beauty of its detail, it is worthy to be compared to the chapter-house of St. George's, Boscherville. The excellence of every portion is equally incontestable in both, and there are some points of similarity in the two works which can rather perhaps be felt than described. The chapter-house was built by Abbot Victor, who was abbot from 1157 to 1211, and its date is, therefore, somewhat uncertain. The date of St. Joseph's Chapel, on the contrary, is most exactly defined. The wicker church, on whose site it was built, was burnt down on the 25th of May, 1184, and the new chapel was dedicated on the 11th of June, 1186. At this period, then, we see a building in which the architectural features are, in part detached columns with caps and bases; in part mouldings of masonry continuous round jamb and arch. The great north door illustrates this: two of its orders have shafts, with capitals and bases; two, continuous lines of carved ornament. The buttresses all have engaged shafts at their angles,—*i.e.*, shafts worked out of the masonry, and not detached nook-shafts. The groining shafts, like those to the buttresses, are all pointed in section,—*i.e.*, they have a sharp line up the centre of the face, and the same feature is repeated in the mouldings on the western turrets. The great abbey church to the east of this chapel is all but destroyed; but what remains shows that its designers had advanced in style, but had retained many of the peculiarities of St. Joseph's Chapel. The engaged shafts in the buttresses, with the sharp centre, and the system of continuous moulded columns instead of detached shafts, is carried still further. What is more singular, is that the wall-rib of the groining is carried up from the window sills, and returned round them also. Thus you will see that the whole scheme is one of moulded stonework, as opposed to a system of columns or combinations of detached shafts. At Wells the same system is seen. The cathedral was built during the episcopate of Jocelin Trotman, who was consecrated in 1206, and who died in 1242. From 1208 to 1214 he was in France, having been banished for taking the Pope's side against the King. Jocelin the Englishman, as he was called, knew all about the French art of the day. He was present at the laying of the first stone of Reims Cathedral in 1211, and he saw Notre Dame completed, and no doubt many others of the great French churches in progress. But even if he admired them, his English sense made him, or else his English architect was, as far as any one could be from choosing merely to repeat anything that he saw, with the one doubtful exception that to a certain extent he retained the square capital. The nave piers show us in perfection what we see only in ruins at Glastonbury. They are masses of masonry, built up of eight clusters of triple shafts carrying alternately octagonal and square capitals, and on these arch mouldings of three orders, two of which are planned on the chamfer and one on the square. Above the triforium is a long arcade, three to each bay, of moulded members, continuous round jamb and arch, and above this a clearstory, modernised, it is true, but with no sign of ever having had any inside shafts or any string-course or abacus at the spring of the arches. The groining is carried upon a triple shaft built into the wall. Everywhere the detail of moulding and carving is admirable. And the effect of the modest dimensions of this little church (the nave is only 37 ft. wide from centre to centre of the columns, and about 66 ft. high), insignificant as they are in comparison with those of the great French churches, is nevertheless very beautiful and harmonious in all points of view. The

groining is supported by flying buttresses under the roofs of the aisles, but there are none above them. The clearstory wall is, instead, very thick, and only moderately pierced with windows, so that the construction is as unlike that of the examples in France, of which I was speaking in my last lecture, as it well can be. I ought, perhaps, before this, to have said that the north porch and the west front and western steeples are in a wholly different style from the work I have been describing in the nave and transepts. The one is probably of earlier, the other of later, date, but in both the detached shaft is used as freely as possible in opposition to the style of the nave, where its use may almost be said to have been prohibited.

The influence of Glastonbury and Wells, or of the Doulting masons and architects,—which ever it was,—did not end here. Throughout Somersetshire, when you come upon a piece of thirteenth-century work, it is generally in the same style. The same style is conspicuously visible at Llandaff and at St. David's, and seeing that St. Patrick was buried in Glastonbury, it would not be unreasonable to look for some evidence of its influence in Ireland. But it was the course of conquest more probably than of pilgrims which led to the introduction of Glastonbury art into Ireland. Strongbow's invasion was a South Wales invasion, and everywhere within the Irish Pale we see the architecture suddenly changed from the old Irish style to one which has the most definite evidence everywhere of its Somersetshire origin. In Christ Church Cathedral, Dublin, for instance, we see the same triple shafts, the same combinations of groups of them to form columns, the same alternation of square and octagonal caps, the same fondness for the engaged column with an arris or edge formed up the centre of its face, the same general proportions, the same carving of foliage, and the same love of continuous mouldings. Kilkenny Cathedral, Kildare Cathedral, and others show the same features as Christ Church, Dublin, and at Killaloe, and constantly in Irish examples we see the feature seen at Glastonbury and at Wells, and rarely elsewhere,—the mouldings of window jambs returned round the cills.

Interesting on all these grounds as the church at Wells is, I have selected it for notice to-night not only because of its specially English character, and of the influence it exercised, but because it presents in a marvellously perfect condition the whole group of attached buildings which makes up the complete English cathedral establishment, and which are so rarely seen remaining and still in use anywhere on the Continent. Among them are the chapter-house, the cloister, the bishop's palace, all containing considerable portions of the thirteenth century, besides a marvellous collection of later Mediæval buildings. The chapter-house was begun rather late, and its crypt only can certainly be said to be of our period. This is of special interest, as showing that though our English architects liked a square east end, they had no sort of dislike to a circular building, and the plan of the crypt, with its central column under that of the chapter-house, the eight detached shafts which surround it, and the planning of the groining with none but triangular bays, will have much interest for those of you who followed me in my remarks on the planning of the chevets of the French churches. The bishop's palace is not less interesting. It, too, was built by Bishop Jocelin, and agrees in style with the later shafted work of the west front. Its lower stage is mainly a long groined chamber subdivided by walls and partitions, and above this, on the first floor, a long gallery lighted by windows, which illustrate well a favourite development of the men who built the west front. They not only began to make their windows more decorative by joining lights together, but they gave them cusped internal or rear arches. By cusped arches I mean arches which are formed of a series of curves without any enclosing arch; these occur frequently in the west front, in a doorway in the cloister, and in various windows in the Palace, wherever one meets with the work of this second school of Wells architects.

From the simple Early Pointed work of the palace one goes on to the slightly later work of the chapel, and thence to the magnificent ruin of the hall, at each step finding the development of the style more advanced, till, in the last, the work of Bishop Burnell, at the end of the century (1274-1292), we have the complete change effected to the Middle Pointed style. Nowhere, therefore, can you see better than here the gradual change which the century saw completed. At the beginning we have the work of an architect whose great idea was to make his work solid, and yet as beautiful as possible, by the simple use of well-designed mouldings, of groups of moulded shafts for columns, and by the simplest use of the pointed arch. Then, probably, before the west front was begun, another man came upon the scene. The first man had cared nothing for what was being done at Salisbury. He had been not only English, but Somersetshire to the root. His successor thinks this line a mistaken one. He admires what the Salisbury, the Lincoln, and other English architects were doing, and covers his west front with arcades or arches, all carried on detached shafts, and enclosing the figures and statuary of which all Englishmen are or ought to be so proud. His influence is evident also in the bishop's palace, and to a less degree in the great dining-hall, where the windows have still internal jamb-shafts; but in the end the early system is practically accepted again, and almost all over England in the fourteenth century the system of moulded and clustered solid shafts, and continuous lines of arch and jamb moulding, which had been first brought to perfection in Wells, was accepted as the best and universal rule.

Something must now be said of one of the great examples of the other system, and we can hardly do better than see the effect it produced where, as at Salisbury, it is carried all through a building instead of being, as at Wells, confined only to one front. Salisbury Cathedral was built from the ground on a site never before occupied. The first stones were laid on April 28th, 1220. In 1225 some altars were consecrated, and in 1229 Bishop Poore, the founder, died, and in 1258 the cathedral was consecrated. By this time, after thirty-eight years' work, we may assume that the church was practically complete. It was later in its foundation, probably, by some half-dozen years than Wells. Bishop Poore and his architect,—Elias of Dereham, probably,—had no sympathy with the system of design pursued in the nave of Wells. The Isle of Purbeck was in the diocese, and there was every reason, therefore, for indulging as much as possible in the use of its beautiful marble. The introduction of detached shafts wherever possible, and which follows naturally from the use of marble, wholly changes the character of the architecture. The effect is admirable; but, on the other hand, the risk in construction was great. The variety in the plans of the clustered columns at Salisbury was very great. In the nave the common French section of a circular column surrounded by four smaller shafts is adopted, but here the shafts are detached from the centre column. In the choir the columns are surrounded by eight detached shafts. In the doorways and windows, shafts are placed in various ways,—in clusters and one behind another,—so as to produce very deep effects of light and shade, with the advantage that, all the lines being curved, the transition from light to dark is never too abrupt. In the lady-chapel this system culminates. The width is subdivided into three aisles, and the vaults are carried,—one is almost tempted to say appear to be carried,—on shafts so long and so delicate and frail, as to have required the very highest skill to ensure their standing, even during their construction, let alone standing as they do, 650 years after their erection! The architect throughout the cathedral dispensed, as did the architect of Wells, with visible flying buttresses; he used them only under the roofs of the aisles, but in order to make the thrust on the walls less, he built his vaults with stone ribs, filling in the spaces between them with concrete made of a very light calcareous tufa. He used an unnecessary thickness of this material, but as it was extraordinarily light, his construction was generally perfectly secure, as in two or three places only has it been found necessary in later times to add flying buttresses above the aisle roofs. Beautiful as the detail of the cathedral is, there is generally some sense of disappointment in its interior. Unfortunately it is a church full of windows, and the grisaille withwhich these were filled is almost all destroyed. Its roofs and its walls were richly coloured, and the only portion which remained has been restored and is no longer at all like the old in its effect. The painters, as at Chartres, painted the outside work in places, as, *e.g.*, in the west porch and the porch to the chapter-house. In other places, as, *e.g.*, on the concrete groining of the porch and of the nave and on the walls of the cloister, they coloured the walls and then marked them out in imitation masonry lines of red colour. The ground plan of this great church is one of extreme beauty. It has not only the usual transept with an eastern aisle, but to the east of this a second and shorter transept devised evidently in emulation of the eastern transept of Canterbury, which itself was no doubt derived from the great Benedictine abbey church of Cluny, now destroyed, and before its destruction the only church in France in which this beautiful arrangement was seen. This eastern transept has also its aisle on the east, and is of less width and proportion than the great transept. East of the choir are three lower chapels, in which are the delicate arrangements of clustered and single marble shafts which I have already referred to; and it was in the side walls of the central of these three chapels that, before Wyatt's so-called restoration, there remained an arcade, which, for perfection of design and execution, has never, I am bold to say, been surpassed anywhere in Europe. It is now built into the west wall of the eastern transept, and will ere long, I believe, be seen again in its old place. If it is possible to say so much of the interior, what may we not say of the exterior? With one exception,—the destruction of the detached bell-tower, which stood in the churchyard till Wyatt's time,—the church is now more beautiful than it was when it left its builder's hands. Elias of Dereham might well deplore the changes which men have made in the colour of his interior. But could he see it again he would be amazed with the beauty which time has given to the exterior. There is, so far as I know, no building in Christendom on so grand a scale, which is so complete, so uniform in style, so good in the proportions of the various parts to the whole, and altogether, and from every point of view, so thoroughly beautiful, as this grand and most English church. Its surroundings are as beautiful. The quiet close,—unknown out of England,—surrounded by deanery and prebendal houses, by a bishop's palace founded at the same time as the cathedral, the whole group surrounded by its ancient wall, and entered by its old gateways, is in itself a sight for an architect; but out of the green sward which surrounds it on all sides the matchless church rises, with its beautiful cloisters, its splendid polygonal chapter-house, its octagonal vestry on its southern side, in such completeness of grace and beauty as leaves nothing to be desired.

Like Wells, Salisbury is a cathedral well worthy of a young architect's study above most others. For not only will he find there the work of the mason in all its varieties; he will find, too, woodwork of all sorts, moulded, carved, and plain,—roofs, doors, chests, tables, choir-stalls, even the great wooden wheel which was used to raise the stone for the steeple; and in every portion he will find evidence of the same sense of the necessity for completeness, which is the true mark of a good architect at all times. The detail everywhere is admirable. The carving of foliage is very different from, though in my opinion generally inferior to, that at Wells, and there is one very singular feature which is seldom seen in England. The arcades of the parapets, and in many other places, are carried on quite regardless of the buttresses which intersect and stop them. So that, *e.g.*, in the front of the transepts, there are arcades not regularly divided, but quite accidentally arranged with half or a third of an arch abutting against a buttress, so as to give the appearance of the buttress being an after-thought put on against the arcade.

I should have liked to take you on to the other great thirteenth-century churches, to talk to you about Archbishop Walter Grey's magnificent work the transept of York, and to compare this with his work at Southwell. I should have liked to shew what Saint Hugh, and, after him, Jocelin of Wells's brother, Hugh of Wells, bishop of Lincoln, did so exquisitely in their glorious minster, and, above all, to have seen what that great Yorkshireman, Henry Murdac, once monk of Clairvaux, then abbot of Vauclair, then of Fountains, and afterwards Archbishop of York, did in the magnificent abbey, so much of which still remains in the beautiful valley of the Skell; how at Fountains he built at first in a French style, and how, as elsewhere, gradually the English art re-asserted itself. But, after all, the story is much the same everywhere, and the superlative interest of such an abbey as Fountains is the insight that it gives us into the domestic architecture of the period. The more

one sees of it the more does one discover that in those good days there was no such distinction between domestic architecture and ecclesiastical as has sometimes been supposed to exist. The same details that were applied to one were thought suitable to the other; it was the best construction and the most suitable arrangement, the most beautiful proportion, the most delicate moulding of stonework, the truest system of carving of foliage, that were everywhere seen, whether the work to be done was for a house or a church, for a monastery or for a castle. The work in the great hall of the castle at Winchester is as good as that of Bishop de Lucy at the same time in the cathedral. The castle at Chepstow is as good, and in the same style, as the abbey at Tintern, and the hall for the layman at Acton Burnell is on the same lines as the hall which Bishop Burnell built at the end of the thirteenth century in the palace at Wells. No more pernicious doctrine has ever been inculcated than that which supposes one sort of art to be sacred and unfit for use for secular purposes. The best art is that which is fittest for the first purpose, and I suppose we all agree that we should, if it were possible, like to have it for the other also. This is the lesson of the thirteenth century, on which so much remains to be said that I am distressed to think how inadequately I have been able to say what, with more time, I hope I might have said in detail on the subject. It was impossible that in an hour all could be said that might be; and it seemed to me that there would be more chance of saying something new to you if I took a somewhat similar line on the development of styles in the best periods in Italy, France, and England, than if I tried to show you exactly how they differed one from another in each detail of their work, and exactly what those details were. It is my fault if I have failed to show you how interesting the study may be made if you pursue it with something beyond the mere daily drudgery of attention to business. The other arts hardly afford the young student a tithe of the pleasure or the profit from such studies which everywhere throughout the civilised world attend the earnest student of architecture, and my last words to you for this year are, that you should regard the addresses which I have given as being entirely meant to be suggestive of further lines of study and investigation by yourselves. And I end, as I began, by impressing on you that no one can become a good architect who does not earnestly study what men have done before, who has not enthusiasm for his art to make him long and resolve to do nothing but what is good in its practice, and who is not ready to show that he has enthusiasm by the industry which surely attends it, and without which no study, no lectures, and no schools can be of any real service.

THE TERRIBLE LESSON FROM ST. PETERSBURG.

THE horror which was aroused by the tremendous news of the 13th of March from St. Petersburg has been succeeded by a feeling of stupor. The leaders of public opinion have stilled their own emotions of alarm by the use of the language of sympathy and of condolence. It is well that civilisation, as represented by its royal leaders and most august assemblies, should thus utter its instinctive protest against a new form of crime, which is marked not only by a reckless cruelty, but by an amount of scientific knowledge and persistent labour hitherto without precedent. That the life of any human being lies at the mercy of any other who is ready to throw away his own has long been considered as an abstract axiom. But if we remember rightly, since the murder of King Henry IV. of France in his carriage by Ravaillac, no attempt on the life of a reigning monarch has succeeded until the present fearful instance, with the sole exception of the stabbing of Gustavus III. of Sweden, at a masked ball, by Ankerström, in 1792.

The lessons taught by this fatal explosion are of the utmost gravity and moment. For the most part, they are not such as to find an appropriate place in our columns. But there is one point which very deeply concerns us all, and which is within the range of our ordinary counsels. We refer to the terrible sanction that has been given to the counsel to exercise a strict and watchful supervision over the manufacturing, the storing, and the sale, of all substances readily fatal to human life.

Man is filling the earth. Populations are becoming everywhere denser. Precautions that may be needless in a part of the country where there is an inhabitant to every four acres become imperative where there are forty inhabitants to an acre. At the same time that what may be called a negative cause of danger is thus rapidly increasing, the positive causes are increasing with much more rapidity. Science is daily forging deadly weapons. This is done, in the first place, in the service of industry, as in the case of the facilitating of mining by explosions, the lighting of towns and houses by gas, and the like. In the second place, it is done for the purpose of national defence,—a purpose which, unfortunately, it is not practicable to disconnect from that of aggression. Such are our monster guns, our torpedoes, and all our great military and artillerist improvements. Then comes the rapid growth of chemical science, a growth which in itself is a mark of progress, but in the course of which new poisons, new explosives, new instruments which cannot be used without risk, are continually being invented. And lastly there is the truly diabolical ingenuity which applies these discoveries of science to the service of treason, of arson, and of murder. Of this the construction of the glass bombs (if such they were), filled with nitro-glycerine, or some other compound, of which two were thrown with such fatal precision at the carriage and at the person of the Czar, affords deadly instances. Never, perhaps, in the history of the world, has such an outrage been committed on science herself.

That, in the presence of so many and so great dangers, unintentional or intentional, it is the first duty of society to exert every possible precautionary care, is the lesson which we are now anxious to enforce. We are aware that in this, as in every great public emergency, there will be found some,—the pedantic, the idle, or the mischievous,—who will say, "What is the use? Do you think that if one man be bent on murdering another, you will prevent him from doing so by making it a little more difficult for him to obtain a revolver, a keg of powder, or a few pounds of nitro-glycerine?" To the advice "Don't," which many people are so apt to give on every occasion, there are three distinct answers, each of which is conclusive. First, it is a question of duty. If our endeavours to prevent crime are defeated, so much the worse, both for society and for the criminal. But the possibility that they may be defeated is no reason why they should not be made. Duty is not to be neglected because its performance is not always attended by success. Secondly, in the case of intended crime, it is never possible to tell how far any check may act. In all society there are criminals on the watch for opportunity. The more this is afforded, the more readily will they avail themselves of it. The more difficult crime is made, the less crime (other things being alike) will be committed. Thirdly, all precautions such as we suggest tend to throw light on traces of crime, and thus tend to the detection and the punishment of the criminal; and in certainty of detection lies the chief safeguard of society against crimes of an atrocious character.

We trust that this terrible crime may, at least, have the effect of leading to a thorough revision of our machinery for watching the production, the storage, and the distribution of that daily increasing class of manufactured objects the careless use of which is dangerous to human life, and the mischievous use of which involves arson and murder. Where the safety of human life is concerned negligence is no longer an error; it becomes a crime. As to this, the old common law of England leaves no doubt; and as the individual who neglects the proper precaution in the care or in the use of deadly weapons is held responsible for death or wounds arising in consequence of such negligence, so is society itself responsible when it fails to insist on the adoption of due precaution in all cases involving danger on a great scale. Thus we see among the Parliamentary publications issued during the month of February the title of a Bill for preventing boiler explosions. A bulky report has been issued by the committee appointed to inquire into the causes of the deterioration of boilers, and to propose measures which would tend to increase their durability. Of gas explosions we have had but too often to speak, as well as of the explosion of powder-mills. The numerous and frightful causes of sudden death are so fast increasing with the increase of civilisation, that it may be a question whether it is not desirable to organise some method of supervision that should apply, not only to one, but to all the different sources of public danger, of which but a few have been above indicated.

We had written thus far when the news arrived, on the same day, of the frustrated attempt at outrage at the Mansion House, of an attempt to upset a train near Wolverhampton, by keying two chairs and a sleeper on the rails, and of a military riot on the part of the 18th Royal Irish Regiment at Aldershott. Outrages, indeed, come in crowds. Nor are we entitled to take any great comfort from the consideration of the bungling method of execution, which is combined with the wanton purposelessness, of these pieces of diabolical mischief in England. It seems to be too true that we have entered on a period in which crimes of wanton violence are in course of perpetration. As to their causes, or the proper precautions against them abroad, we have nothing now to say. But at home we have a word of very serious counsel. We must not hug ourselves in the opinion that because crime is foolish, purposeless, or sure to defeat its own objects, it will not be perpetrated. Unfortunately that is not so. What is incumbent on every honest man, therefore, is to consider himself called upon to exert all his watchfulness in defence of order, law, and property. No unusual fact should be unobserved. It is almost, if not quite, impossible to carry out any such crime as that attempted at the Mansion House without some human eye resting on some part of the process. Let each eye, then, be that of a detective,—an unpaid and unwearied detective, anxious for the protection of society. Thus acted the housekeeper, who saw something unusual at the Mansion House. Thus acted the policeman Cowell, whose promptitude in extinguishing the smouldering paper we trust will not be unrewarded. What is needed is alertness. Two minutes lost in the case in question, and very serious damage would have been inflicted on many innocent people,—more possibly on those without than on those within the Mansion House. If every one bears in mind that anything unusual, if not readily explicable, is suspicious; that everything suspicious may indicate grave danger; and that every second of time is in such cases of importance, we shall form for ourselves a great invisible body of detective police, which it will be hard for stupid ruffians such as those who assailed the residence of the Lord Mayor in any way to outwit or to escape.

THE APPROACHING EXHIBITIONS.

NOTWITHSTANDING the important questions that day by day now appear to crowd upon us, at one moment with absorbing interest, we are rather inclined to think that during the early months of our short London season the subject of the hanging of pictures occupies a good share of the thoughts of that increasing class who take an interest in artistic matters to the exclusion even of the other questions relating to art that are at least entitled to an equal amount of consideration. Of all the corporate societies, the Royal Academy may certainly be considered one of the most favoured, and, at the same time, the least that appears to be in need of the beneficent action of the charitable; and yet it is impossible to deny one's sympathy to the Council of the Royal Academy at this season of the year, when they are called upon to regard with becoming seriousness and benevolence the claims of their outside brethren. We can imagine no more painful duty for one body of men to have to fulfil than that delicate matter of determining the precise merit of a large number of works by men of similar pursuits. But surely there seems not a difficult way out of the trouble that comes upon them every year, from the first week in April to the beginning of May, and more than a hundred years' consecutive experience ought surely to have suggested some kind of amelioration for the misery they profess to be utterly incapable of obviating; for, notwithstanding the justly high ground that the Royal Academy take, they are not naturally above being regarded from a commercial point of view, and they certainly conduct with considerable acumen and skill the commercial element of their institution. What would be said of any large business whose managers failed to recognise year by year the difficulties of dealing with increasing prosperity?

Could not a lesson be drawn in this difficulty of the hanging of pictures from the manner in

which Messrs. Christie & Manson would deal with any number of works of art that might be sent to them for sale? Would they not contrive to find, when the few rooms they have at their command were filled, some kind of annexe in which to show all the pictures that have to be included in the sale? Certainly in Paris, at the Hôtel Drouot, the *Commissaires-priseurs*, who conduct that admirably-managed establishment, would be able, if the pressure were great, to throw open fifteen or twenty rooms for the exhibition of any number of pictures, and, what is still more strange, within the shortest possible time all the best pictures would be seen on the line, the most attractive being in central places, and no single picture whatever ill-placed or ill-seen, with properly-selected positions for sculpture, and an exclusive room for architectural and other drawings.

We have all experienced the difficulty of finding a suitable place on our walls for any new possession, and now that walls are so extraordinarily decorated, we are told the difficulty is even greater than ever, and we have seen with a feeling amounting almost to horror the suggestion that pictures had better not be placed at all on the handsome wall-papers. But surely this idea must not be allowed to gain ground in England; in America, of course, it is the fashion for all well-to-do people to have "galleries," where pictures may be properly seen, lighted from above, but of America we are disposed, however erroneously, to think that their social habits and ways of life are not precisely those that Europeans are likely to imitate, although we can recall many a really perfectly-arranged home in America where the pictures, all with a history, have been placed affectionately and with perfect understanding of their importance. Certainly in Paris, great as the changes are that have there taken place in the social world, and greater as they may yet be, such an idea as that of giving up the adornment of his rooms with pictures would be the last, we suppose, that would ever enter the mind of a Frenchman.

But to return to the Royal Academy and the difficulty they again have to get over within the next two months. This difficulty has been considerably lessened by the announced willingness of the Council of the Royal Albert Hall to receive and hang, without submission to any tribunal, all pictures accepted by the Royal Academy, but returned to the artist for want of room. It will simply be necessary for the artist to send with his picture the letter received by him from the Royal Academy informing him of that fact, and the picture will be forthwith hung as a matter of course.

We may anticipate that many artists will gladly avail themselves of this considerate arrangement. We suppose such works would be placed under a separate heading, so that the artists of them would gain all the credit of acceptance by the Academy Council.

ARCHITECTURE AT THE ROYAL SCOTTISH ACADEMY.

YEAR after year architecture is more scantily represented than before at the exhibitions of works of painting, sculpture, and architecture, in the rooms appropriated to the Royal Scottish Academy in the National Gallery in Edinburgh. Various reasons have been assigned for this state of matters; amongst others, that the public takes no interest in architectural drawings, and that, as these are not intended for sale, there is no hardship to the designer in excluding them. It appears to us, however, that the duty of the Academy is to lead, not to be led by, the public; that so dignified a body stoops from its mission when it becomes a mere caterer to the public amusement; and that it was not furnished with galleries at the public cost to be used as a shop or bazaar for the sale of works of art, but for the promotion of art, and improving the taste of the people. Many of the architectural drawings sent for exhibition are, doubtless, poor productions, both as regards design and handiwork; but the same may be said of not a few of the paintings exhibited, and manipulative skill is a more imperative requisite in these than in a drawing, which is merely an illustration of a structure which has been or is to be erected. The painter and sculptor are, in this country, now more frequently called to the aid of the architect in adorning his designs than heretofore, and it might be worth the consideration of the Academy whether it would not be of advantage to artists as a class to give greater encouragement to architects, not only as regards the exhibition of their designs, but in respect of the honours at its disposal.

The number of architectural drawings exhibited this year does not exceed two dozen, and none of these are of large dimensions.

The *Glasgow Herald* office, as designed by Messrs. Campbell Douglas & Sellars, is quite a palatial structure. The elevation is divided into three upright compartments, each furnished with a doorway, the central door being arched and deeply recessed, rising above the ground-floor, and piercing the entresol over it. Emphasis is further given to the centre by two fluted columns, rising above the entresol two stories high, the side compartments having fluted pilasters. Over a cornice of good projection there is a double attic brought to the front, which is highly enriched. The effect of the whole elevation is rich without any appearance of fussiness or overstraining for effect. Mr. Rowland Anderson exhibits two artistically-etched drawings of portions of the Edinburgh University Medical Schools, and an elevation and view of the principal staircase of the Scottish Conservative Club, Princes-street, Edinburgh. The elevation shows a building of four stories and an attic, the style adopted being of the Adams school, careful and conscientious in treatment. The staircase is imposing by reason of an arcade with goodly pillars of composite character, the soffits of the arches being enriched and the walls panelled.

St. James's United Presbyterian Church, Paisley, by Hippolyte J. Blanc, is almost a replica of the church designed by him and erected at Mayfield, Edinburgh. The design is a good one, and will bear repetition, but not too often, even although the details are slightly varied.

The west end of the United Presbyterian Church, Edinburgh, by J. Russell Walker, is a fair example of French Geometrical Gothic, graceful but not vigorous, and without marked individuality of treatment. A spire at one side is balanced by a gabled aisle at the other, but how that is treated in the side elevation does not appear. Mr. David Robertson's drawing of the "Interior of Morningside United Presbyterian Church" is a rather washy production, and probably does not truly represent the actual effect of the church as built; but if it does, the hammer-beam roof, with cusped principals, as shown, does not seem to be a suitable covering over a somewhat massively-treated Norman arcade and clearstory. The manner in which the organ is boarded-in seems unmeaning and inartistic. For a Presbyterian church, the Norman is rather too heavy and intractable a style for satisfactory adaptation; for, unless it is carried out in a massive and thorough manner, the true character of the style is lost.

The "New Church at Juniper Green," as designed by James Fairley, appears well suited for the quiet agricultural village where it has been erected. It looks solid and substantial, and too much has not been aimed at. The bell-cot rests securely on the gable, which is strengthened by a retaining arch, and the buttresses have not the weak effect too often found in such buildings. The "Free Church at Yester," by John McLachlan, is an example of the other mode of treatment,—a pretentious, ill-proportioned little spire flanks a meagre-looking gable, and is supported on the other side by a weak buttress, which terminates in a gabled and panelled pinnacle. The church designed by James Fairley for the neighbourhood of Edinburgh is a proper enough example of a Dissenting chapel, without individuality of any sort. It is Italian in style, and the west elevation (of which only a view is given) shows a pedimented centre, flanked by towers crowned with domes.

Equally uninteresting, although much more stately, is the "Design for New Municipal Buildings for the City of Glasgow, Front Elevation," by John Armstrong. Here we have an imposing Corinthian portico, with decorated pediment, an equally imposing dome,—the proportions and details of which seem to have been suggested by St. Paul's,—and the extreme angles of the elevation finished by coupled small domes, which are the only peculiarity in the design, and not very happy in effect.

It is unusual for a Glasgow architect to be called upon to design a mansion in Essex; but Mr. J. B. Wilson has been equal to the occasion, and has produced a design in brick of the Queen Anne style, and we think that "Ryldene" will hold its place with other residences of the same class. Returning to the north of the Tweed, where stone is abundant, we find that "St. Margaret's, Kircaldy," by R. Rowland Anderson, is a Gothic residence, homely and unpretentious,—a very desirable retreat indeed.

The "Fernery and Winter Garden at Woodside, near Paisley," designed by H. J. Blanc, has more of an architectural character than is usually found in such structures, stone having been freely used and with good effect. The "Additions to Dunbeath Castle, the Seat of Mr. W. S. Thomson Sinclair," by David & John Bryce, are so similar to what we have, year after year, seen emanating from the same source, as hardly to call for remark. The well-known features which go to the making up of a Scottish baronial residence are here produced with little attempt at originality of treatment. The "Proposed Buildings for the Spiers Institution, Beath," designed by Campbell Douglas & Sellars, consist of an elongated group of Gothic character,—a central tower with open-work spire marking the junction of a higher and a lower portion of the group. From the character of the design we are led to infer that the Institution is to be devoted to educational purposes. The "House at Morningside," designed by John McLachlan, is a pleasing example of a villa with a projecting wooden roof; but why Mr. McLachlan should inform the public that this and another drawing exhibited by him are "the property of John McLachlan, esq., Edinburgh," we fail to see.

AREAS OF RATING.

DURING the last six years the state of the weather over Great Britain has been unfavourable. There has been absence of the sun's light and warmth, excess of cold, excess of fog, and excess of rain. These excesses have affected vegetation unfavourably, leading to damaged herbage and deficient harvests; rivers have overflown their banks, and many thousands of acres of land have been submerged, to the ruin of any crops usually produced on such drowned areas. Another most serious result has arisen from this exceptional state of the weather, namely, excess of disease among sheep and cattle, resulting in great loss to the farmer, and in injury to the general community, as nearly all the meat brought to market has more or less a taint of disease, and very much more absolutely diseased meat finds its way into the possession of the poor than inspectors can detect and stop, some of this abominable rubbish being used in making cheap soup, meat-pies, and sausages. It is not pleasant to be enabled to put forth this statement, but the writer has made it his business to acquaint himself with the facts, and has seen the "slink-butchers'" establishments, and knackers' yards, in the suburbs of Liverpool, Manchester, Wolverhampton, Birmingham, Leeds, and other towns in England, as also in Dublin. We see occasional records of the seizure of unwholesome meat and fish by the inspectors both of London and other places, but we may take it for granted that much more escapes detection. The prevention of floods, the drainage of land, and careful cultivation will, it may be gathered from these facts, be a national benefit. Man cannot alter the seasons, nor prevent excesses, either of floods or of drought, but by more forethought he may devise works and establish regulations which shall modify even excesses of meteorology, and by law secure further supervision over all matters connected with human welfare.

One great barrier to national improvements is involved in limited area rating for costs. England is, for the most part, under municipal and magistrates' government. Municipal for towns, the justices for counties, highway-boards for roads. Freedom, or local self-government, is, no doubt, a grand thing; but if an entire country is to be put into and be maintained in the best position for convenience of trade and commerce, and for human comfort and health, there must be a prime central governing body having jurisdiction over the whole. The roads and rivers of a country ought to be cared for by one supreme establishment, as in France, and the rating for such purposes ought to be levied over the entire property of the country. It should be a form of taxation without any exemption. It is attempted to be indicated, in these crude and brief remarks, that the entire population of a country is affected by the ele-

ments; and that isolated works, however costly, cannot bring about general improvement; consequently universality of supervision, so far as any country is concerned, can alone effect the highest state of convenience and comfort by the construction and supervision of all works connected with roads, bridges, arterial drainage, and the conservancy of rivers.

Prophecy is not necessarily supernatural, as it may be predicative from known facts, or the solution of a mental problem by drawing an inference from experience. At this time, a Prevention of River Floods Bill is in Parliament, and we venture to predict that, if rating is confined to limited areas, the Act, when it has become law, will, for the most part, be a dead letter.

A GERMAN CASTLE.

SCHLOSS SCHKOPAU ON THE SAALE.

THE German poet who wrote, "On the bright banks of the Saale, Castles tower bold and proud," happily expressed the sentiment which clings round the many old castles,—most of them in ruins,—in Saxony and Thuringia, along the banks of the Saale, which, next to the Rhine, is perhaps the river most sung about in Germany. Castle Schkopau is one of those strongholds which could tell us of the splendour of past centuries, and of the power of old noble families. Schkopau, formerly called "over the Aue," or meadow, situate about half an hour from Merseburg on the Saale (Prussian Saxony), at one time belonged to the archbishopric of Magdeburg, to which it was given by Emperor Frederick II., in 1215, together with 120 hides of land. It remained in the hands of that see until 1444, when it was sold by Archbishop Günther to the bishopric of Merseburg, and finally passed into the possession of the family of Trotha, who, after a lapse of four centuries, are still the owners of it.

The family of von Trotha, whilom von Dradt, is one of the most renowned of the Saale district. The most eminent and best known member of the race was Thilo von Trotha, at one time bishop of Merseburg, whose memory is still kept alive by a curious custom. Visitors to Merseburg will be shown in the outer castle-yard of that town a large wooden cage, painted black, containing a raven. That raven has a history of its own. Bishop Thilo von Trotha, who resided in the castle of Merseburg, is described by tradition as a cruel and oppressive ecclesiastic, though, perhaps, not more cruel and oppressive than many others in the rough-and-ready times in which he lived. The story, well authenticated in the chronicles of the old town, runs that he possessed a valuable ring, which all of a sudden disappeared. Suspicion fell upon an old and trusted servant, who, notwithstanding his protestations of innocence, was executed, it is said by the orders of the bishop. Several years passed by, when it became necessary to repair the towers of the castle and the cathedral church, which forms the southern side of the inner castleyard. The bishop was considerably startled one day when his long-lost ring was brought to him, having been found in one of the spires of the cathedral by the slater repairing it, hidden in the nest of a raven. The natural proclivity of ravens as well as magpies for hiding things is well known. The bishop is said to have been so much struck by remorse and grief at his act of rashness that he soon after died; but in his last will he set aside a sum of money to serve for keeping a raven in a cage "for ever," with the injunction that, as soon as one raven dies, another is to be caught and put in its place. This testamentary provision has been, and is still, loyally carried out, after the lapse of centuries. The writer of these lines, who has spent over twenty years of his life in the old town of Merseburg, has a dim recollection of a seedy-looking, broken-down old raven, reported to be blind, hopping about in his cage, cawing at bystanders and his keeper when he brought him his prison fare. But this is an aberration from our subject proper, suggested by the memory of early days.

Schloss Schkopau, situate close upon the banks of the Saale, was formerly a castle of robber-knights. The only mementoes of its former use are the old donjon tower on the water-side and the remnants of colossal walls. There exists no reliable information as to the changes which have taken place since those times; only this much being known, that the castle was rebuilt during the reign of Frederick the Great. The most recent transformation into a monumental edifice is due to the artistic inclinations of its present owner, General Ernst von Trotha, who has had the entire southern façade completely rebuilt, from designs by the architect Haene, of Halle. This reconstruction, as will be seen from our illustration, is in the German Renaissance style, executed in a skilful manner. The material used is Nebra stone, a reddish sandstone, which imparts to the whole building a very peculiar, uniform tone. The rich stonework of the castle front has been executed after drawings by, and under the supervision of, Emil Schober, master-mason of Halle.

Of historical interest in the principal façade are, in the first place, the two life-size figures, in sandstone, of the ancestors of the present owner, Wolfgang and Bishop Thilo von Trotha. The garden, with its fountain, formerly the fosse, surrounds the castle like a belt, and opens into a park along the banks of the Saale. Stone stairs lead to the castle entrance, adorned with the coat-of-arms of the family, the most striking feature of which is formed by two ravens, each with a golden ring in its beak, subsequently adopted, it is recorded, by Bishop Thilo. Through this portal an imposing vestibule is entered. Its ceiling is vaulted; the floor is of Mettlach tiles, and two chandeliers are suspended in the large arch opening on to the stairs. The staircage is handsome. The stairs are of Silesian marble. Light is admitted by a high window filled with painted glass. The centre of the window, surrounded by old German ornaments, presents the figure of a knight, carrying a standard in his right hand, upon which the arms of the family are again represented. The ceiling is in the form of a canopy, carried by small vaults resting on columns, the latter serving as framing for a series of little windows. The walls of imitation marble, as well as the metal doors, complete the striking impression of the whole.

The first floor is appropriated to suites of rooms occupied by General Ernst and his brother Thilo von Trotha. The library of the General is panelled up to 10 ft. high, the ceiling being of richly-carved oak. Brown leather hangings, with a dark blue border painted on a gold ground, fill the remaining wall-space. In the same story are also located the Ancestors' Hall, with purple-coloured silk hangings, the portraits of former members of the family, and the White Hall, which may be distinguished from outside by the large treble window, with balcony. Behind the latter begin the rooms of the owner's wife, ending in a room in the tower.

The architecture of the slender tower has a pleasing effect. Winding stairs lead to the attic story, whence, through dormer windows, adorned with obelisks and executed in sandstone, a splendid view is obtained towards three sides over the surrounding country, great part of which belongs to the family of Trotha.

"An der Saale hellem Strande
Stehen Burgen stolz und kühn!"

SUMMERS PLACE, SUSSEX.

OUR illustration shows the two principal fronts of this mansion, just rebuilt upon the site of an old Sussex farmhouse, for Mr. Robert Goff, who has recently purchased the estate of Summers, near Billingshurst.

The area of the house is about 200 ft. in length by a width of 50 ft.

The entrance-porch gives access to the hall, 30 ft. square, with an oak timber roof and ornamental gallery. The bay-window is filled with figured glass, by Powell & Sons; the floor and dado are of oak, and the chimneypiece, of Beer stone, is richly carved with the arms of Goff, with motto, "*Fier sans Tache*"; Latour, with motto, "*Pour Dieu et mon Pays*"; and Innes, with motto, "*Ornatur radix fronde.*" The staircase hall contains oak stairs, 6 ft. wide, and leads to library and morning-room, the latter, 54 ft. by 20 ft., opening into a conservatory, 29 ft. by 18 ft. The dining-room is 28 ft. by 18 ft. wide.

On the first-floor, Mrs. Goff's boudoir and the family bedrooms occupy the space over the morning-room, library, &c.

The gallery across the hall (14 ft. wide) leads to suites of visitors' bedrooms, and over the kitchen wing are the ordinary bedrooms, schoolroom, &c., approached by a separate staircase. In all there are twenty bedrooms.

The walls are built hollow, in two 9-in. brick thicknesses, tied together with galvanised iron cramps, faced externally with red brick, the window and other dressings being of Box-ground stone; the roofs are covered with Broseley tiles.

The windows of the principal rooms are secured with Clark's revolving shutters. The bells are electric, and the gas services are worked by Edmundson's patent atmospheric gas machines. Messrs. Edmundson also supply the roof cisterns with water from a well distant a quarter of a mile, with an electric tell-tale to regulate the supply.

The conservatory, hall, and reception-rooms are warmed by Rosser & Russell's boiler and pipes, the latter protected by a layer of patent silicate cotton from injuring the parquet and oak floors and dados.

Messrs. Minton have laid the floors of corridors and conservatory with ornamental tiles.

The stoves were supplied by Messrs. Feetham & Co., and Barnard & Bishop.

Messrs. Toplis & Sons, of Berners-street, have worked, from the architect's detailed plans, all the elaborate oak carved over and under mantels for chimney-pieces, inlaid with bevelled glass and Lincrusta decoration, the carved oak window cornices, oak tables, sideboard, library book-cases and other fittings, in accord with the style of the house.

Messrs. Burke & Co. supplied the alabaster chimney-pieces for the morning-rooms.

The general contractors were Messrs. Braid & Co., of Chelsea, and the cost of the works was 12,000*l.*

Mr. Sharman acted as clerk of works for the architect, Mr. Norton, of Old Bond-street.

RICHMOND FREE PUBLIC LIBRARY.

THE Richmond Free Public Library is now completed, and is expected to be opened in May. It forms an agreeable feature amongst the quaint edifices of the Green. The style, as will be seen in the view we publish, is Gothic, and the front is of red brick with white stone dressings. The internal arrangements comprise a large well-lighted open-roofed news-room, 45 ft. by 45 ft., from which are divided, by ornamental counters, two roomy spaces for a reference library and a lending department. Inside the entrance-door an open staircase conducts to a ladies' room on the first floor, which overlooks the newsroom by a balcony, this being happily adapted as a prominent feature seen from the ground-floor. The upper floor, reached by a separate staircase from the outside porch, is devoted to the residence of the librarian. Provision is made for separate lavatories. The building is heated by a system of hot-water pipes, with apparatus in the cellar.

The architect is Mr. Fredk. S. Brunton, of Richmond, Surrey; and the contractor for the whole of the building and fittings is Mr. J. J. Osborne, of West-place, Turnham-green.

The cost of the site was 1,000*l.* That of the building will be about 2,300*l.*

It is expected to open with 10,000 volumes, a large number having been already presented.

MODERN SCIENCE APPLIELD FOR DOMESTIC PURPOSES.

ALTHOUGH electrical and other scientific discoveries and inventions follow each other in rapid succession, yet fogs hang over our cities like funeral palls, evidence that the process of heating, either for cooking, warming, baking, or washing purposes, &c., is still almost, if not quite, as imperfect as it was when Count Rumford drew eloquent attention to the extravagance and defects of the heating arrangements of his day. And although laundry, baking, and other domestic labour-saving machinery has of late been invented, yet so far it is not utilised.

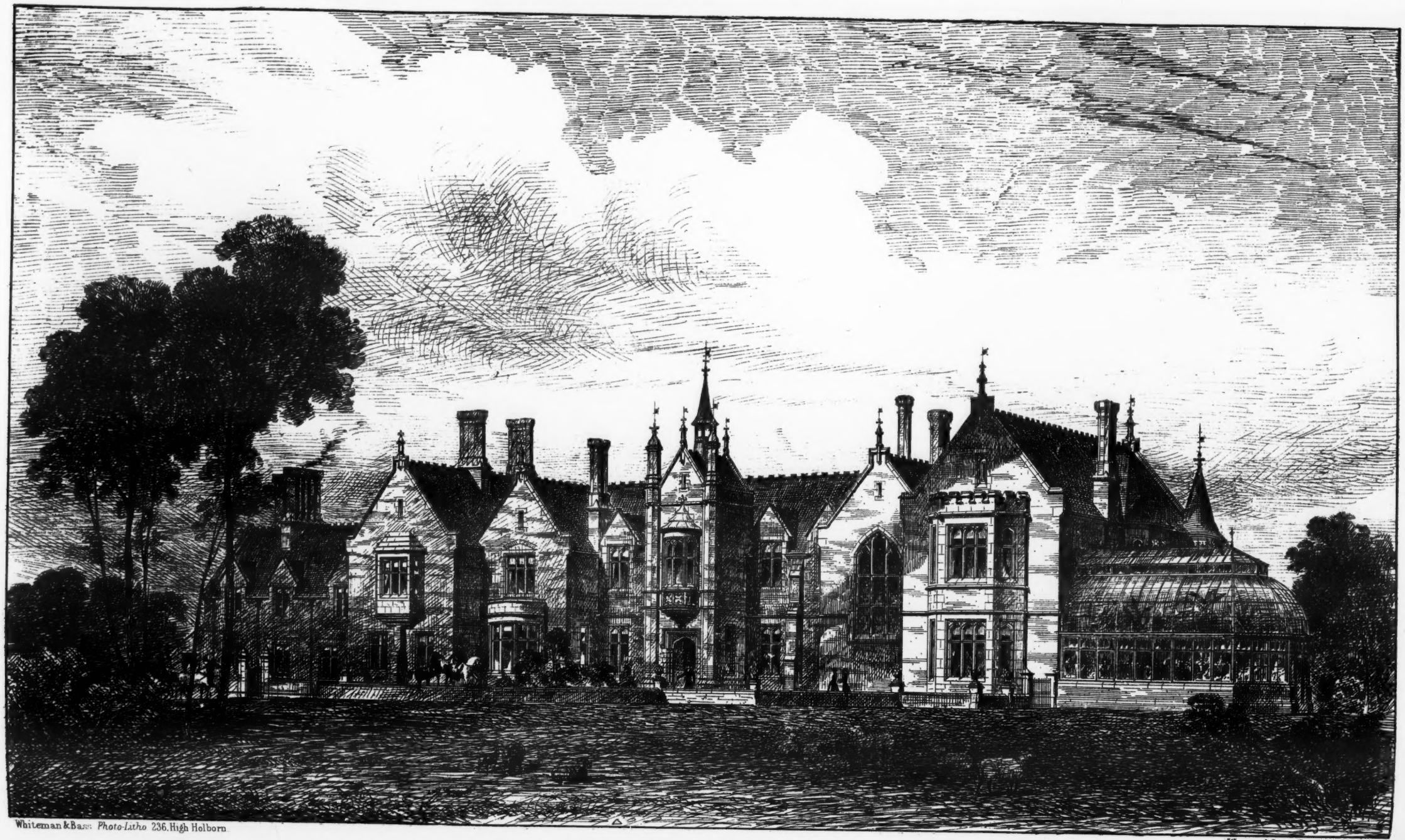
If a system of concentration of the arrangements of heating for warming, baking, laundry, and other purposes were adopted to supply a district of some several hundred houses, instead of each household providing its own more or less imperfect and laborious arrangements, the transition and improvement would be as great as was that of the substitution of reservoir water for the town pumps, gas for candles, or the great factory for the spinning-wheel and distaff.

This system of concentration of heat and motive power for domestic uses is all that is now required to enable the wonderful electro-dynamic energy to be applied for the telephone, telegraph, and for providing the motive power for small

Whiteman & Bass, *Photo-Litho.* 236, High Holborn.

Wyman & Sons, Printers, 74 Queen St.

SUMMERS PLACE, SUSSEX.——GARDEN FRONT.



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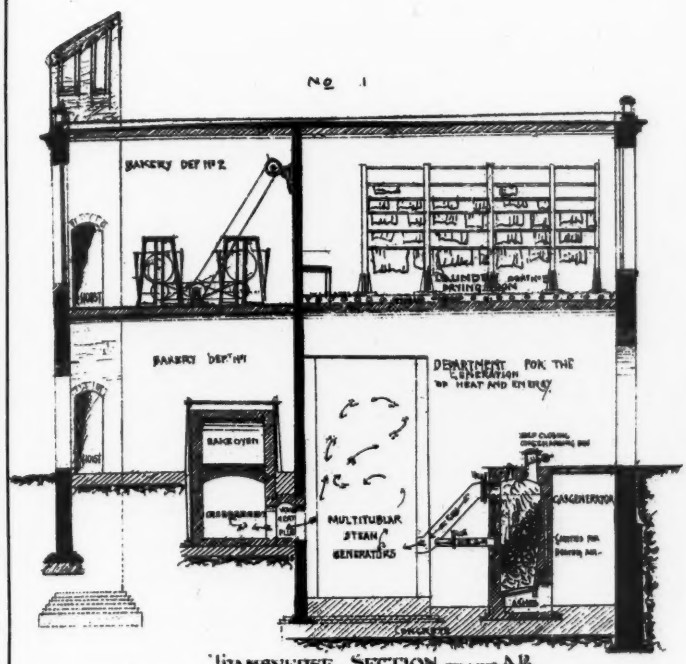
SUMMERS PLACE, NEAR BILLINGSHURST, SUSSEX.——MR. NORTON, ARCHITECT.

SCHLOSS SCHKOPAU, NEAR MERSEBURG, S

ERSEBURG, SAXONY.—BAUMEISTER HAENE, ARCHITECT.



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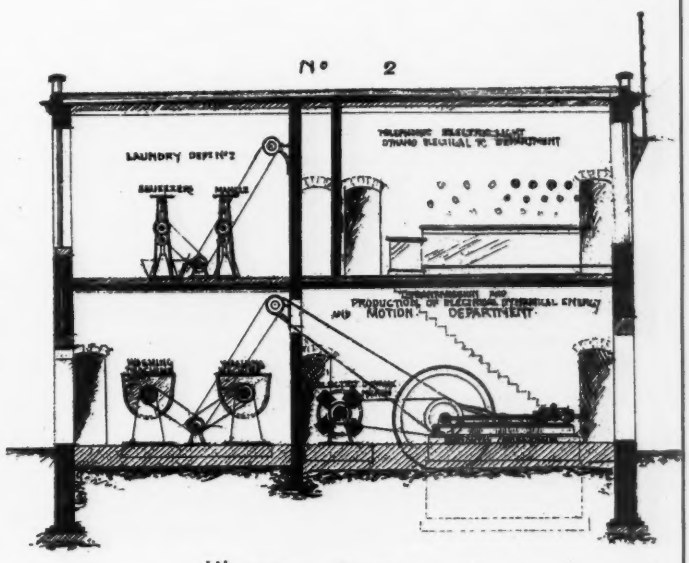

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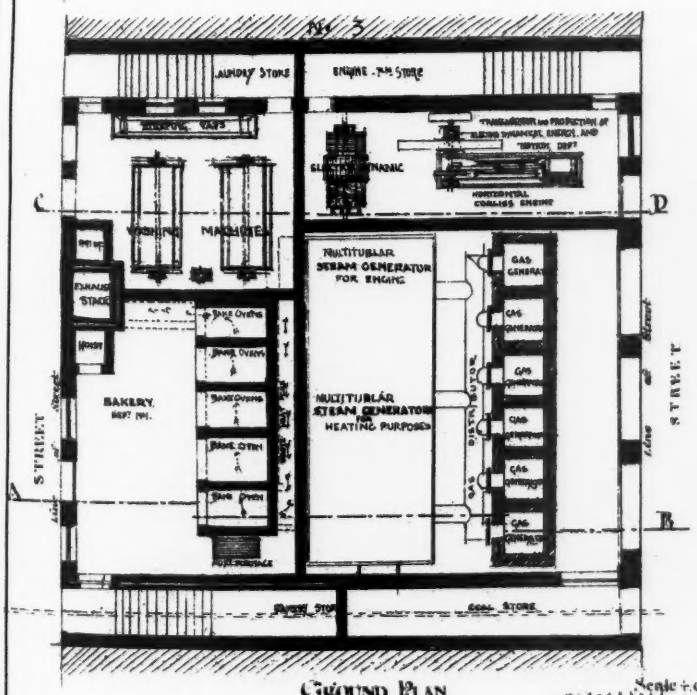
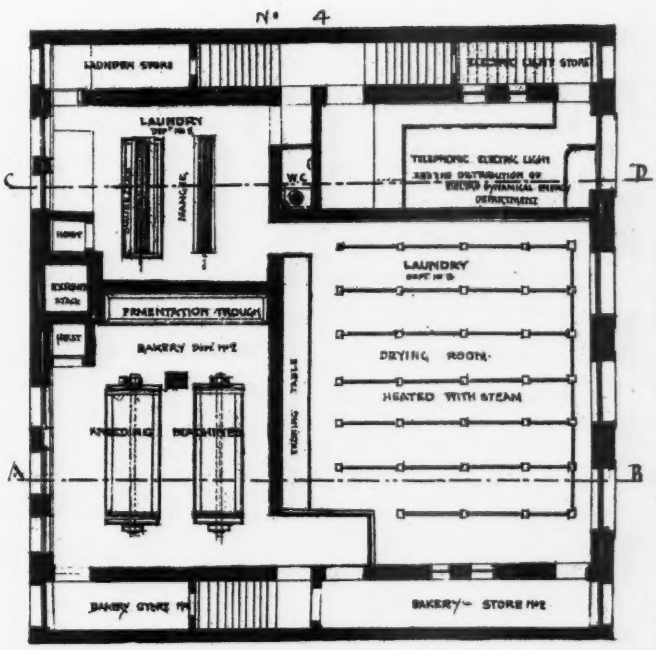


GROUND PLAN

Scale of Feet



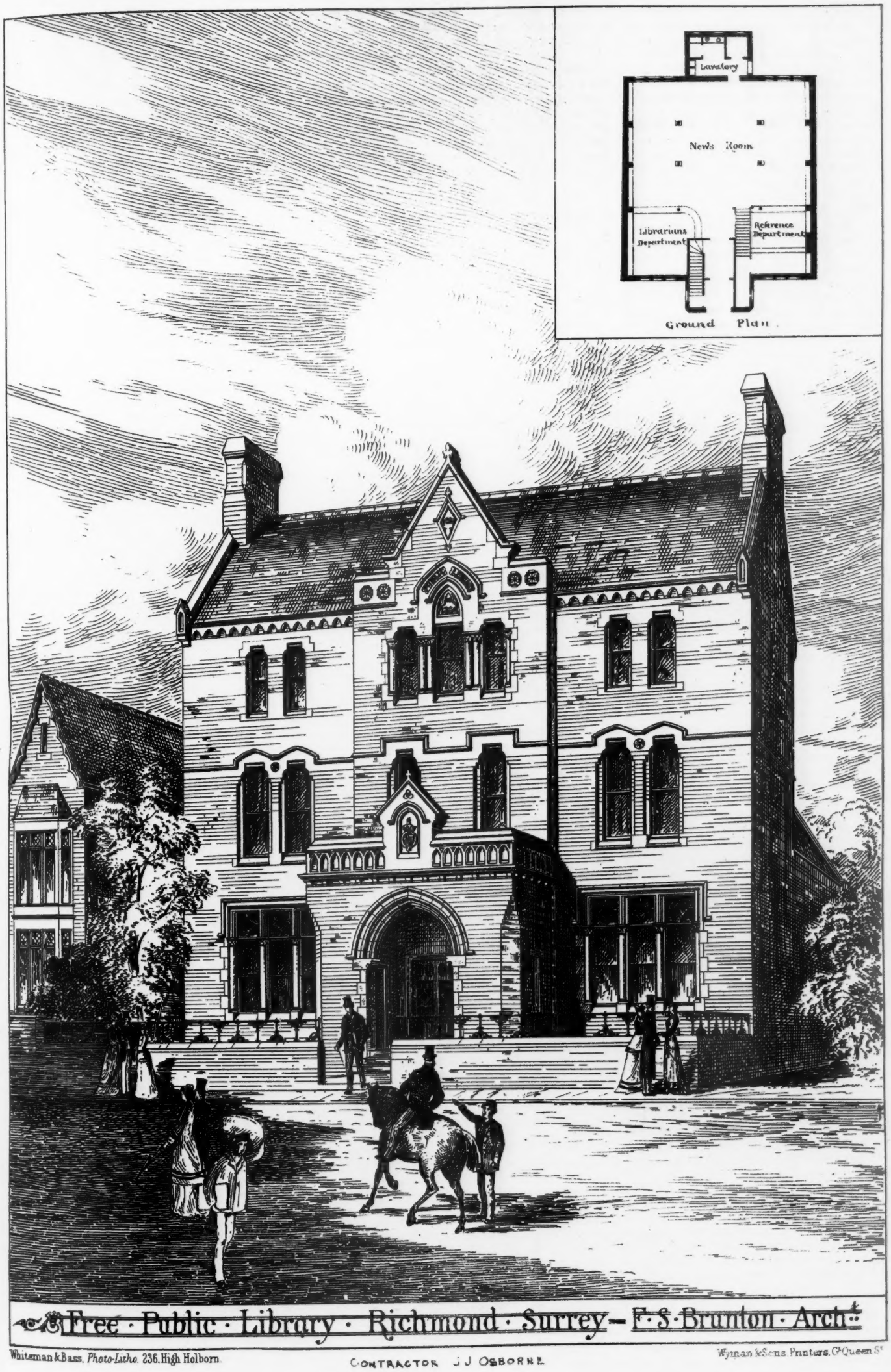
FIRST FLOOR PLAN

BLETHWAITE.R

MODERN SCIENCE APPLIED FOR DOMESTIC PURPOSES.

Whiteman & Bass, *Photo-Litho.* 236, High Holborn.

Wyman & Sons, Printers, Gt Queen St.



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Whiteman & Bass, *Photo-Litho.* 236, High Holborn.

CONTRACTOR J J OSBORNE

Wyman & Sons, Printers, 74 Queen St.

household machines, and for practically producing electrical illumination for domestic purposes. The plans and sections 1, 2, 3, and 4 show the concentrated arrangement suggested for a small district. The building could be built in any street, and could be made a pleasing architectural feature, and not unworthy of the most fashionable localities, and it would be evidence of great strides in applied science.

In the plans suggested, the heat for the various purposes is generated in a series of gas-producers, the top of which is level with the street. The producers are fed with fuel by means of a self-closing charging-box.

The heat produced in generating the hydrocarbon gases in the gas-producers radiates through the brickwork, and thus heats the air circulating in the cavities. This air, after circulating through the cavities, where it is intercepted by numerous bafflers, led by a wrought-iron tube, unites with the gas from the producer. The heated gas and air igniting produce almost perfect combustion, and the products of combustion are perfectly gaseous, and, therefore, could not produce fogs or smoke. The heat passes around the tubes forming the heating apparatus and steam-pressure generator. The steam for warming is heated to produce a pressure of about 35 lb., and conducted to the various houses in the district. The principal mains, of course, vary in size from 4 in. to 1 in. The branches vary from 1 in. diameter to ½ in., according to the requirements of individual households. A special valve and meter to indicate the consumption are attached at each branch, and are placed under inspection similar to that of water or gas.

To prevent wasteful radiation, the steam mains are covered with a thin layer of asbestos-paper, then wrapped with Russian felt, and a wrapping of Manilla paper; the mains thus covered are laid in a timber or iron box with a movable upper side, which has also to contain the electrical conducting wires.

By various arrangements of coils, the steam can be used for any desired heating purpose; by circular coils water can be boiled, various cooking operations can be performed, and the heat is available for the bath-room or the conservatory. Any room can be heated *instanter* to any desired temperature, and the heating arrangements are under perfect control, and the coils can be arranged to heat the incoming air to an agreeable temperature and produce a sufficient exhaust to withdraw the vitiated air; the ventilation and movement of the air can also be regulated at will by increasing the exhaust. No coal-dust or smoke would be produced, and all the household articles would thus be kept clean. The heat, after passing around the tubes of the heating apparatus and steam-pressure generator, is conducted by flues to the underside of any or all of the bake-ovens, and thence to the chimney, so that all the heat is utilised, with the exception of a portion of the heat necessary to create sufficient chimney-draught.

The process of baking is arranged to be carried on in the most economical and hygienic manner, as the kneading,—the most laborious, and very often the process which most contributes to the unwholesomeness of bread,—is done by machinery, and thus the bread is saved from the contaminating influences of contact with unclean hands and sometimes feet.

The washing arrangement is equally economical. The great labour processes of washing, squeezing, and mangling are done by machinery. The drying-room is heated by coils of steam-pipes covered with sheet-iron, so as to form a floor. Ventilation is ensured to give the clothes what housewives call a "freshness."

The steam-pressure generator is formed of tubes coated with magnetic oxide so as to render them imperishable; in case of explosion, the smallness of the tubes and other parts of the steam-pressure generator would prevent serious consequences. The steam pressure drives a horizontal Corliss engine, which distributes motion to the laundry and baking machinery and to the electro-dynamic machine.

The electro-dynamic energy is led (by conductors laid in the boxes containing the steam mains) to the various houses in the circuit, and can be used for hoisting, knife-cleaning, sewing, boot-cleaning, and other domestic machinery, as well as for small industrial machinery when required.

The telephone and wires for illuminating purposes are laid in the same way. Each householder in the circuit could have telephonic communication with the central establishment.

The central establishment could have all the advantages of a telephonic exchange, so that each householder could be placed in direct communication with his tradesman or professional referee, &c., or (in case of fire) with the fire-brigade stations.

The great obstacle to the practical application of electric illumination for general household use is the fact of the great frictional resistance offered to the passage of electricity, and the immense power required to overcome this resistance. The central district establishment suggested would remove this difficulty, and would enable the electric light to be enjoyed by the householders in the circuit.

These establishments could either be conducted by companies, vestries, or corporations, at a fixed tariff in proportion to the requirements of each householder.

When this suggested concentration arrangement is carried out the public will then fully appreciate all the blessings derivable from the modern brilliant discoveries in science, instead of, as now, merely reading of them before a smoky fire, in an atmosphere vitiated by a coal-gas light, rendered necessary by a still greater nuisance,—a black, suffocating fog,—filling the atmosphere with sulphur, and preventing the passage of the warm and invigorating rays of the sun.

B. H. THWAITE, F.C.S.

ORNAMENT, HISTORICALLY AND CRITICALLY CONSIDERED.

ROYAL INSTITUTION.

MR. H. HEATHCOTE STATHAM delivered the first of a course of four lectures on this subject, on Thursday, the 17th inst. He defined ornament as being any kind of design added to an object to increase its beauty or interest, but which design would not of itself have intrinsic interest enough to be hung up or displayed for its own art value. Ornament might be characterised as metaphysical art, not imitating nature, but dealing with such abstract qualities as proportion and balance of lines and spaces, which were very closely allied to geometry. So far as ornament directly bore on natural forms, it treated them in a modified manner. For instance, the irregularities of some kinds of plant-form could be adopted as the basis of an ornamental design, but the irregular serrations and groupings of the natural leaves or flowers would need to be symmetrically or rhythmically arranged. Ornament was not colour, or, perhaps, it would be better to say that colour was not ornament. Colour was only the means of emphasising and bringing out the forms of the ornament. It had nothing to do with the form or design, and, indeed, it stood on a different basis. Ornamental design was not dependent upon physical laws, whereas colour was dependent upon physical laws. Ornament was independent of colour, as could be proved by taking a single form of ornament and colouring it in several different ways. One of the most important and essential qualities in all ornament was rhythm, for without rhythm no ornament could satisfy the inherent longing of the human mind for the regular succession of forms at equal intervals. This rhythmical succession or repetition was capable of variation by the alternation of different forms in the same general design, and this principle of alternation was a great and important source of ornamental effect. With regard to the question of symmetry as a basis for ornament, there was room for some difference of opinion. Almost all the Greek ornament was composed of designs which were precisely alike on each side of the central line, whereas the greater part of Japanese ornament was arranged without any reference to equal division over the surface on which it was applied. His own impression was that the ornament which would hold the ground in the long run was that which was based on a symmetrical basis, and that the unsymmetrical type of ornament had met with the favour it had on account of its piquancy. At present there was a very great run upon unsymmetrical ornament. It was comparatively a new thing; for it was only within the last few years that we might be said to have discovered Japanese ornament, and it had been, he thought, somewhat overrated. There was another sense in which symmetry was practicable in ornament, and that was in the direct and obvious relation of the parts of the design to one another. That was a quality very strongly insisted upon by Owen Jones, who went so far as to say that all ornament, to be worth anything, must be founded upon geometrical division of space. Owen Jones did not probably, know much about Japanese ornament. He lived before it was so well known to us, and if he were alive now he would perhaps have modified that remark somewhat. The same kind of rhythm which was required in the lineal extension of ornament was also required in its geometrical extension over a surface. In connexion with this question of what might be called geometrical symmetry, there was also that of the distribution of ornament in relation to the space it covered, even when it was not geometrical. It was desirable that such ornament should fill evenly the space in which it was placed. In regard to curves, it was an almost absolute requirement that all curves springing from each other or from a straight line, and developing in the same direction as the originating line, should be tangents to it at the point of departure. Where this was not the case, the ornament would have a cramped and unnatural appearance. The sum of all the qualities which had been mentioned, rhythm, symmetry of arrangement and repetition, alternation and equal disposition of spaces, and the proper mathematical growth of curvatures, constituted what the lecturer designated "abstract" ornament, using the word as distinguishing it from such ornament as was more or less in imitation of nature. Abstract ornament was, in short, that ornament which dealt only with the abstract qualities of space and size and line. There were various classes of abstract ornament, including ornament by variations of surface, or what were known to architects as mouldings, which should be neither more nor less than careful and artistic contours of surface. Having referred to the subject of ornament arising out of constructive details the lecturer proceeded to speak of ornament derived from nature, and discussed the extent to which the latter class of ornament was subject to the same laws as abstract ornament. He adduced reasons against the direct imitation of nature in ornament, while, however, adhering to the principles of nature. He thought that, unless under exceptional conditions, the human form should not be introduced as part of the ornamental detail of buildings unless treated very conventionally. The purely naturalesque treatment should be reserved for figures which were intended as part of the sculptural accessories of the building. The imitation of artificial objects in decoration, such as were to be seen in such profusion in the works of Grinling Gibbons, was always bad. Gibbons, indeed, might be described as a consummate executive artist, who employed himself continually in beautifully executing bad art. All such ornament by imitation of artificial objects was an attempt to make ornamental effect without the exercise of thought, whereas true ornament was the application of thought to design, and was generally valuable just in proportion to the thought that had gone to its production.

The second lecture of the course was delivered on Thursday last.

IMPRESSIONS AND RECOLLECTIONS OF NORTH WALES.*

THREE years' residence in North Wales has confirmed my previous impression that, fashionable as it has become of late years as a resort of the tourist, it is not yet duly appreciated by English people generally. Nine-tenths of those who go to Switzerland and the Alps in search of beauty, it is probable, have no idea of the beauty they leave behind them in the Principality. "I would not give up the mists," said Wordsworth, "that spiritualise our mountains, for all the blue skies of Italy," by which he meant that the British mountains are daily raised by the agency of our humid atmosphere from being mere masses of stone and earth to something supernatural, often celestial in aspect, and girt with a power highly to enkindle the imagination.

Due to the same cause,—the humidity of the atmosphere,—are the thousand hues spread over the whole face of nature, especially exquisite on the trunks and boughs of trees, hues from dark-green to gold, and ever changing with the seasons, which, if not peculiar to Wales, is more striking in Wales than elsewhere; while the inconceivable beauty of the skies, by the ceaseless play of sunlight on the fleeting clouds,

* Read at a meeting of the Liverpool Architectural Society, March 9th.

must bear the palm over anything which sunnier climes can show.

I do not pretend to have seen all the great sights of North Wales; but I have been in solitudes into which few tourists, I fancy, have penetrated, when I have been surprised at their extent, and seen more of Nature's unmarred face, and her workings in woods and glens, than perhaps ninety-nine hundredths of the tourists; and can therefore aver that Wales is not a mere picturesque array of wild mountain scenery, but a rich, verdure-clad, well-wooded country, presenting every other kind of beauty usually found in external nature, from elegance and richness to the highest pitch of sublimity, and where the full power of nature over the heart may be experienced. Its lakes will not vie in magnitude or loveliness with the glassy lakes of Cumberland or Killarney, but they are at least sufficient to give that life and spirit which water bestows, and the full complement of beauty to the grander features they accompany,—the Carnarvonshire group of mountains, amid which Snowdon lifts his head and shoulders, completing the climax in a scene which, for beauty and grandeur, is unequalled in Great Britain, and capable of satisfying the instinctive longings of man for the peaceful and beautiful. The beauty of the Lake district lies chiefly in its lakes, that of Wales in its mountains.

One cause, I conceive, of North Wales being not duly appreciated is tourists confining their visits to the dry summer weather, when there is no water in the rivers and falls, and no clouds in the sky; and its being but little seen at its best time,—the late autumn and winter, when the rivers are full and the skies cloudy. Of those who visit it in the summer few are aware that the best time to see the country is the rainy season, when there is not a gleam of sunshine, with which, at least in the sylvan parts, it can dispense; showing how intrinsically rich and beautiful it is. In open country the sun is always an acquisition, but here among the trees, in the interior parts of Wales to which I am now referring, he is not needed to set off the pure and perfect state in which all rejoices.

Here the charms of nature in her pristine loveliness and virgin purity, as on the morning of her birth, are everywhere spread around, exhibiting a delicacy and refinement beyond the power of art, I mean the art of the landscape gardener, to produce. This is the main charm of North Wales,—a rare one in this railway century. In this it is rich, and consequently nothing can beat it for forest vistas ending in a perfect mystery of ramification, foliage, and misty sunlight, which in summer is one boundless contiguity of shade; nor for the beauty of individual trees, and the vegetation that clings to their trunks and boughs, making compound pictures, the *acme* of the picturesque. Switzerland cannot in some respects be equal to Wales, as it lacks the moisture for the mosses.

The river-scenery I am best acquainted with is that of the Conway, from having lived on its banks, and the Lugwy, which joins it at Bettws-y-Coed; and this is beyond anything I had anticipated. I had no idea previously that water in its passage to the sea could form such pictures as does the first-named river through almost its entire course,—waterfalls constantly presenting themselves; or that any conspiracy of circumstances could render rocks so beautiful,—every one of them a picture in itself; the general effect heightened by the grim, hoary look which some have acquired. Ever and anon you come upon an umbrageous spot which might have given Milton a hint for his Eve's bower.

Of mountain scenes I have witnessed some that will dwell in my memory for ever among my most extraordinary recollections or imaginings. One of the most potent to awaken sublime emotions occurs to me at this moment. It was a near view of Moel-Siabod, which, being more detached than the other mountains, is fully seen from below. Standing near the foot of this mountain, on the side next to Bettws-y-Coed, which is the steepest, snow-clad save where relieved by some delicate dark lines all converging towards its summit, which was lost in the clouds, it suddenly broke on my view, I forget whether by a turning or opening in the road or otherwise, glowing with an unearthly radiance,—awful,—mysterious, yet beautiful. It seemed literally the end of this world,—a great highway out of it into the next,—where you might expect to see Christian, of the "Pilgrim's Progress," with staff and burden, going up it; or the angels in Jacob's dream, ascending and descending upon it. Never had any feature of this earth worn to me so spiritual an aspect. I had seen mountains exhibiting every species of grand form of earth or rock, and every variety of foliage, in all the hues of the rainbow, and crowned by forest upon forest; but this was a visionary glory more like some grand dream of Dante or Milton than a Cambrian scene. The mountain of stone and earth was transfigured,—etherealised,—glorified; and yet, to the susceptible imagination, grandly symbolising something more glorious still,—a glory yet to be revealed.

The interest of North Wales was heightened to me by the romantic situation of the human nests of all classes,—cottages, farms, country-seats,—on the sides of the mountains or the ridges of lofty hills and crags, apparently inaccessible. To some their ivy-clad state and lonely situation, shut out from the busy world, give a touching charm; the greater for that look of consciousness which attaches itself to old buildings,—especially human habitations,—as if they saw and knew us. One cottage I often passed in my walks, when I was generally my own companion, situated at the foot of a mountain, with a lofty sycamore spreading its protecting arms over it, and which seemed thrilled by the spirit of the solitude, would have realised the ideal of Zimmerman, or gratified the wish of Cowper,—

> "for a lodge in some vast wilderness,
> Where rumour of oppression and deceit
> Might never reach him more."

Indeed, it is not the least of the advantages of North Wales that there the sick at heart of the folly and heartlessness of the world may find a peaceful and soothing retreat from it. There are villages 1,000 ft. above the sea, amid a panorama of mountain peaks, like the Lonely Vale of the Solitary in "The Excursion," where you might be as secluded from the world, and be as soon forgotten by it, as in the cloister of the monk or the cave of the hermit. Forbid your newspaper, and your retreat would be complete, as no wrong or outrage could reach you from your neighbours; for such is the contented and peaceful condition of North Wales, whose moral atmosphere, like its physical one, is the purest in the British Isles, that, except to exclude the sheep, locks and bolts are needless. The vice which is the prolific parent of most other vices is almost wanting here; only, I think, on some national festival, and when "the harps was play," have I seen drunkenness.

The guide-books pronounce most of the Welsh towns to be pleasantly situated. Their founders would have found a difficulty in placing them otherwise. The lines have fallen to them in pleasant places because there are no unpleasant ones. Some are eminently beautiful in situation, gracefully inserted into the bosom of surrounding nature, and graceful objects seen from without. But the beauty which dwells in the heart of the hills, and woods, and rocks of North Wales, has not entered into the heart of its towns; the general character of which is that they have no architectural character at all, and exhibit besides a gloominess and monotony the very opposite to the brilliancy and beauty without. In some parts of Llanrwst the daylight seems absorbed by the houses, and "sunshine saddens as it falls,"—a defect with which the blue stone has something to do; for on the coldness of blue walls and blue roofs the sun himself has little power. In the churchyards the blue tombstones deepen the gloom of mortality itself.

What is more to be lamented, the fault has been perpetuated in most of the recent places or extensions of old places. At Bettws-y-Coed there are houses as wretched as houses can be, unfit for human habitation, forming collectively, indeed, a Welsh St. Giles's; while the hotels and lodging-houses evince but little of the expanding influence of mountain and glen on the minds of their builders, who have yet to learn what pitiful things are towers, and pediments, and pointed gables surrounded by the colossal peaks and pinnacles of nature. It is in some measure relieved by a well-built Norman church erected, a few years ago, for the service of the Church of England, a noble pile externally, and not out of harmony with its surroundings. But, like many kindred structures that strew Great Britain, it is a glaring anachronism, being lighted through glazed loopholes and otherwise ingeniously adapted to the days, not of Victoria, but of William the Conqueror.

There are a few exceptions to the general character I have given of Welsh towns. Such are Caernarvon, Llangollen, Dolgellan, Barmouth, Ruthin, and one or two others. The one best known to me, from having lived in its neighbourhood, is the last-named one, Ruthin, in the Vale of Clwyd, which is a cheerful place, eminently calculated to excite a love of home. It contains some nooks and houses quite romantic and joyous in their expression. Wrexham, sometimes called the metropolis of Wales, which the church alone would redeem from the general character of dulness, has some light and cheerful spots; and so has Denbigh.

But a new era in architecture is heralded by the appearance of Llandudno, which, enthroned as it is amid romantic and sublime spectacles of nature, surrounding a semicircular bay between the two headlands, appears to me capable of becoming not only a first-rate watering-place, equal to Scarborough or any other, but a great city for perennial residence. Its lot has fallen in a region worthy of art's choicest gifts, and where it has everything to charm it into beauty. This new town, as I remarked in a paper on it in the *Builder* a year or two ago, seemed to me like a cleaned and brightened bit of London brought to the seaside for the good of its health; which is not entirely a compliment, as a bit of London would have no business between the two Ormes Heads; and it must take the advice I humbly offered it in that paper, ere it can grow into full harmony with its surroundings. As its example cannot fail powerfully to influence the future architecture of Wales, for good or ill, it is to be hoped that Llandudno, which already shows something like architecture, will grow to the silent music of the ocean and the mountains around it, till it becomes all that the art and science of the nineteenth and twentieth centuries should make it.

The sight of a pure, unblemished country like this, where nature is uncontrolled, and infinite variety and beauty of form and colour, in trees and shrubs and hedgerows, bound his view on all sides, must be good for the architect; for in it he sees the grand storehouse of his art. Architecture derives the elements of its ornamentation from many sources,—from nature, geometry, painting, sculpture, from the works of man, as musical and philosophical instruments; but the most beautiful elements that adorn architecture are imitated from natural forms. The sight of these in their richness and perfection must make the architect feel the monotony and poverty of our mural decorations inside and out; as a glance at the sky, variegated with clouds which the sun is for ever melting into dreamlike splendours, would suggest how much we have erred as to the character of our ceilings in some of the most pretentious modern buildings. What bare, lifeless things would many of our greatest modern works appear could they be suddenly transported into some luxuriant valley in Wales, say the vale of Llangollen! How like so many pale corpses among living men!

In reference to composition the architect would feel his imagination expanded by the bold and romantic aspect of North Wales,—its almost continuous ranges of lofty mountains and impending crags, intercepted by numerous and deep ravines. If there are sermons in common stones, there ought to be whole volumes of sermons and treatises in groups and chains of mountains formed by successive throes of nature, piling Ossa upon Pelion. The architect more than any one else should observe how nature builds and buttresses, and the enormous depth of shadow, and the solemn breadth and grandeur she is evermore displaying. Among mountains, I know of none more inspiring or instructive than Snowdon, which is remarkably architectonic in its forms. No thoughtful architect can visit this Cambrian Parnassus without being struck with the grandeur of Nature's manner of disposing her masses; or leave it without thinking how Architecture may associate herself, as it were, with the Creator Himself, by emulating and idealising one of the grandest of His works. While the blue vault of the sky suggests the wish to spread out the spherical vault over the empty space, and hang it apparently upon nothing, such mountains as Snowdon suggest the high capabilities of the dome for exterior grandeur, as the crowning mass of an architectural pile.

In the romantic glen of Llanberris, where the rocks piled on rocks which compose its sides rise almost perpendicularly and stretch their bleak points to the clouds, rivalling all that is fabled of Cyclops and Titans in the expression of structural grandeur combined with endless variety and harmony of colour, no architect with any imagination could wander without increase

to his mental resources, and benefit to his future works, should they be of a scale to afford opportunity in regard to the expression of power, and sympathy with the sublime in nature.

A true work of architecture, whatever its style, is an intellectual image of the visible creation, being derived by analogy from nature, —vegetable and animal. It is exactly what Nature herself would have produced working under the same conditions. Therefore, the more familiar an architect is with external Nature, the more truly he appreciates it and drinks in its spirit, the more artistic will be the character of his works, and the higher will be his standard of excellence.

But I must run back to Llandudno just to advise the authorities, as they extend it into the pure country, to beware of pollating the pure air, which is every year growing more precious in Great Britain. England is fast becoming one great town, with iron streets, and no suburbs; and atmospheric purity is almost confined to Wales, where the air-polluting power of Liverpool, which extends, to my knowledge, as far as Chester, is not felt. In the Vale of Clwyd the air has been slightly injured by engines at work on the mines, but beyond Rhyll it is perfectly pure.

The effect of the natural beauty of North Wales on the mind is enhanced by another source of interest,—its historic prestige,—the memories enshrined in its mountains and dells,

"Of the bard and the hero, the mighty of yore,"

and the struggles of its people for country and home of which it has been the arena, and which has consecrated its soil in the imagination of every generous mind. What mountain or valley has not been pressed by the feet, what ancient stream has not been dyed by the blood, of its patriots in the thousand years' struggle for independence with Roman and Saxon and Norman? Rightly viewed, the three Edwardian fortresses, as well as those of the Lords of the Marches, are trophies of their valour and heroism. Related to which virtues, as were the lays of the Troubadors and Minnesingers to chivalry, are the songs of the bards; and Wales is pre-eminently, at this day, a poet-land,—a land of song, where, if you do not meet with angels, you may meet with eminent poets unawares, for they are pretty thickly strewn. I remember feeling proud of an acquaintance I had made with a bookseller at L—— on learning that he was a distinguished bard. I believe the Welsh literature is richest in poetry and eloquence because the language is peculiarly fitted to present images vividly to the imagination. I have seen preachers in Wales exert a power over the hearts of their audience that I have witnessed nowhere else.

After all, what I was most impressed with in North Wales was the extreme purity, beauty, and grandeur of its mountains and valleys, and peaceful lakes, which, though they have not given birth to an English Lake school of poets, there can be no doubt have awakened the imagination, and been one grand fountain of sublime emotions, of many poets beyond the pale of the Principality. They attract landscape-painters innumerable, some of whom I have heard saying that there is no place equal to Wales,—not even the Lake district, nor Scotland, for "painting stuff," that is, material for the landscape-painter. "There may be," say they, "what strikes as more beautiful, but nothing paints so well as Wales."

Yet it has often struck me forcibly that of the numerous and fine pictures I have seen professing to be views of Welsh mountain scenery, none makes any approach to the original, and that a great part are mere parodies on it; which suggests to me that it is a mistake to suppose that, as landscape-painting takes rank below historic and figure-painting, an inferior degree of artistic talent is sufficient for the landscape-painter. Such are the subtilties and delicacies of line and form, and light and shade, of which the peculiar character of Welsh mountain scenery, and the more poetic and evanescent effects daily witnessed among the mountains, are made up, the truthful rendering of which depends more on drawing than colour, that only those accustomed to draw the subtile lines of the human frame could do justice to them. Turner, who must have devoted some time to the rivers of France, has, I doubt not, done something like justice to river-scenery; but I have a strong impression that nobody has yet done anything like justice to the Cambrian mountains.

The grandest of the effects on these mountains, which range from the most pleasing, when their snow-crowned summits, lighted by the morning sun, seem basking in the light of God's countenance, to the most awful that can be conceived, reminding of the vision of Eliphaz, in Job, of the spirit that passed before his face, which he could not discern the form of; and the finest views of the other romantic and poetic scenes which the country affords, being only to be witnessed in the late autumn and winter, I believe they are never seen by the great bulk of the artists, who, with tourists generally, visit the country only in the summer; and that those who do see them fail to paint them, either from insensibility to their beauty or for want of severe training in drawing.

To their full rendering, more especially the giving of the true character to the endless variety of clouds which the light is ever breaking into a thousand shapes of beauty, I believe only the skill and practice in drawing of the figure-painter is equal; and a careful inspection of some of the works of the great landscape-painter, Turner, which are generally considered as the perfection of landscape, does not much weaken my belief. Turner was wonderful in colour and atmosphere,—*i.e.*, in giving the mistiness and mysteriousness of distance; but, if I may speak and live, in his clouds I see, instead of the infinite variety of nature, a mannerism which always proclaims them to be Turner's. Many of his later productions (which are ranked by persons ignorant of art as the dotage of his pencil) are abstractions of light and shade and colour, which show nothing so much as his great artistic power. But, at the same time, may it not be presumed that they would never have been left in that chaotic state,—a state which caused them to be sometimes, during their arrangement in the Royal Academy, hung upside down,—had he considered the dignity that more attention to form would have given them?

Professor Ruskin complains, in eloquent terms, that no moral end has been answered, no permanent good effected, by the works of the landscape-painters; that they may have amused the intellect, or exercised the ingenuity, but never spoken to the heart. "Landscape-painting," says he, "has never taught us one deep or holy lesson. It has never made us feel the wonder, nor the power, nor the glory of the universe." While I share the high views of the mission of art on which this complaint is based, I can say further, that I never knew a landscape-painter,—and I have known and conversed with some of the most distinguished,—that, as far as I could judge, ever dreamt of a moral end in his works; and I have too often had occasion to contrast in my own mind the landscape-painters with the great landscape *poet* Wordsworth, who, throughout his works, aimed at nothing less than to arouse, as he himself expresses it, the sensual from their sleep, and win to noble raptures the vacant and the vain.

I cannot conclude without breathing a hope that Wales will be preserved from any injury to its beauty beyond what is inevitable from the growth of towns or the working of the quarries, which has already disfigured it,—at Ffestiniog, I observed, to the extent almost of pulling down a mountain. Railways have already done some mischief that was not inevitable, and not a few lovely spots have been needlessly violated. As the so-called restoration process renders the buildings it preserves not worth preserving, so railway visits to beautiful places render them not worth visiting. Create facilities of access to a sequestered spot, and it is no longer a sequestered spot. Throw it open to the many and it becomes of no value to any. There are enchanted spots in Wales, as well as at the Lakes of Cumberland and Killarney, which the wand of a Manchester excursionist in the shape of knife or walking-stick might disenchant in a moment.

The beauty of nature, if for nothing else, is worthy of preservation for its educational value. It is, though not dreamt of by Adam Smith, among the higher wealth of the nation. It bears the same relation to the emotional part of the mind that the mathematics and physical laws bear to the intellectual. It disciplines, purifies, and elevates the passions. The soul, by a secret sympathy, drinks in the harmony which enchants her; and the realm within assimilates to that without, sanctifying both pain and fear, until she recognises

"A grandeur in the beatings of the heart."

The beauty of nature calls forth and strengthens the fancy and imagination in the early youth of genius, nurses the fair buds and germs of song, which, unquickened and drooping mid the strife and noise of cities, are, under its influence, brought to life and perfection. It has still higher use: we feel the scenic beauty of nature as the shadow and evidence of Infinite Moral Beauty or Goodness. We recognise it as the smile of our Heavenly Father, in unison with that perfect and beneficent working which causeth the outgoings of the morning and evening to rejoice. We see His wisdom and power in the beauty, order, and harmony conspicuous in the perfect chemistry of nature, but His goodness and loving-kindness in nature's lovely and unblemished face.

It would, therefore, be unpatriotic needlessly to destroy this beauty, which, as the most pleasing chapter in the volume of Natural Theology, should be regarded as a sort of Palladium of the national piety.

I am led to these remarks by a recollection of what has lately befallen the Cumberland Lake district,—a district which has become one of the most celebrated in the world for its beauty; the original of poems and pictures innumerable, and subject of philosophical treatises on the beautiful; the inspiration of the deep, tender, and philosophic strains of Wordsworth, and cradle of a new school of poetry; a region, in short, that contains within it spots, to quote Homer's description of the abode of Calypso,—

"Where, if a god should cast his sight,
A god might gaze and wander with delight,"—

spots the slightest alteration in which, such as the cutting down of a wood, or the building of a house on a scale to dwarf the natural features around it, has given pain to men of taste like cutting at their heart-strings.

All who are susceptible of enjoyment from the impassioned descriptions of the Protean face of nature, of Scott or Byron, of Cowper or Shelley, of Thomson's "Seasons," or Dyer's "Grongar Hill," should be anxious to preserve from a similar outrage the Principality of Wales; a country which, being geographically united to England as well as politically,—a western wing, only balancing the corresponding eastern one formed by the counties of Norfolk, Suffolk, and Essex on the other side, ought to be looked upon as a part of England. Nay more: containing the most hallowed and celebrated mountain in the British Isles, held sacred by the ancient Britains, it may be considered our classic ground, as sacred to us as were the mountains of Phocis and Bœotia to the ancient Greeks. There may be said to be the haunts of the English muses and Apollo, as well as the best place for contemplating the pure and perfect working of the spirit of nature. Snowdon is our Parnassus, Cader Idris and the Lakes are Helicon and the fountains of Hippocrene and Castaly.

SAMUEL HUGGINS.

HOLLAND AND ITS ARCHITECTURE.*

WHEN asked to give a paper on some subject this session to the members of the Architectural Association, your secretary was anxious that I should qualify in some respect the simple heading I proposed, "Holland," by adding "The Architecture of." I preferred, however, the one word, for two reasons. First, it left me free to take up whatever branch of the subject I might deem most interesting; and secondly, I avoided laying myself open to the awkward position of the gentleman who undertook to read a paper on snakes in Iceland, and who, when he began to study his subject, found there were no snakes there. It has been contended by many that there is no architecture in Holland. The guide-books omit that general summary of the architectural features which generally forms the preface to their description of a country. Fergusson, in his "History of Modern Architecture," viz., of the Renaissance period, devotes one page only to it, and illustrates and speaks of only one building, the Town-hall of Amsterdam, one of the most pretentious and least satisfactory of any in Holland; and the only description I can find (and that after I had written this paper) which treats of the subject is one by Mr. Brewer, read to the Architectural Association in 1876, who described the Cathedral of Bois-le-Duc and some other buildings in South Holland. This, at all events, leaves me a fair field to begin upon. I should wish it to be clearly understood, how-

* Paper by Mr. R. Phené Spiers, read before the Architectural Association on the 18th inst., as elsewhere mentioned.

ever, from the commencement, that because I shall attempt to treat the subject this evening, and as far as lies in my power endeavour to interest you in it, it by no means follows that I am prepared to advise any of the students of the Association to make Holland their camping-ground for their summer excursions. They possess in our own country and in the North of France much better material to cut their teeth upon, and it is only when they are of more mature age and experience that they should venture to visit and sketch in a country where what we call "Queen Anne" reigns supreme.

The architecture of Holland may be divided broadly into five periods:—First, that which belongs to the Mediæval epoch, which extends far into the sixteenth century, and of which the cathedrals of Bois-le-Duc, Utrecht, and perhaps Haarlem; the towers of the churches at Dort, Delft, Leeuwarden, Enkhuizen, and Rotterdam; the town-halls of Middleburg and Veer, the *waaghuisen* of Deventer, and a few houses here and there, may be taken as examples. Secondly, the work of the seventeenth century, of which the town-halls at the Hague, Haarlem, Kampen, and Leyden; the *waaghuis* or weighing-houses of Leeuwarden, Hoorn, and Alkmaar; and the houses at Dort, Hoorn, Enkhuizen, Delft, and Middleburg offer an interesting series. Thirdly, the architecture of the eighteenth century, consisting principally of town-halls and houses of pretentious but uninteresting character, based on the French Louis XIV. style. Fourthly, the work of this century, quite commonplace, and without very much to redeem its ugliness. Fifthly, modern work. Of the last I have very little to say. I had no intention of reading a paper on Dutch architecture when I visited the country, and I did not happen to come across much of Mr. Cuyper's (the chief architect in Holland) work; I do not feel justified, therefore, in criticising what I saw. Roman Catholic churches seemed to be almost the only modern buildings, and they were generally (those I saw) of a hard and monotonous effect, without any features to note or take interest in. In fact, it was only of the buildings of the first two classes that I made any drawings, and they alone seemed to offer suggestions in design. I propose, as on previous occasions when I have lectured on similar subjects, not to attempt to take you with me on my tour, because to those who have not visited the country such description is difficult to follow, but to arrange my subject under the heads of the different classes of buildings. It may be as well, however, that I should put before you the line of my route. I went by way of Harwich to Rotterdam, thence to Dort, Delft, the Hague, to Leyden by canal boat, back to the Hague, Gouda, Amsterdam, Alkmaar, Haarlem, Amsterdam, Purmurende, Hoorn, Enkhuizen, Harlingen, Leeuwarden, Zwolle, Kampen, Deventer, Zutphen, Arnheim, Utrecht, Bois-le-Duc, Middleburg, Zierikzee, Goes, and thence to Antwerp. There are many other places of interest I might have visited, especially more of those towns now called the "dead cities," and from which the commerce has departed. But it was so difficult to obtain any information respecting them, or to put any trust in the guide-book, that I consider I did pretty well in the month I spent in the country.

The general aspect of Holland is very peculiar. As you journey by rail, or even by boat on a canal, the whole country lies beneath you, one mass of the richest verdure, dotted over by the black and white cattle which luxuriate thereon, and interrupted by long avenues of trees which line the borders of all the roads. The villages and houses dotted about are somewhat disappointing, in that you find little of the picturesqueness which abounds in our own English examples. They are all so neatly kept: the roofs in perfect order, the windows and woodwork all freshly painted, and in the brightest, not to say glaring, colours; the gardens and hedges carefully trimmed, and the palisading all so newly painted that the artist searches in vain for those beauties of colour which time and decay alone can give, and the architect fails to find any of those picturesque combinations of roof or wall in which almost every English village abounds. This want of picturesqueness in the houses, however, was in my case compensated for by the brilliant effects of light as the sun was going down. Owing most probably to the rapid formation of dew in a country intersected everywhere by canals and ditches, and where continual irrigation of the whole surface is going on, the brilliance of the last rays of the sun seems to be diffused throughout the atmosphere, and the most splendid effects of light in the towns, as well as in the country, are the result. The first time I saw it at Dort I thought the street must be on fire, and it at once recalled those brilliant effects which one sees in the pictures of Cuyp, Both, and De Hooghe. Possibly it may not be the same all the year round. I happened to enjoy nearly a month of continual sunshine, and naturally, therefore, the vision of the sun setting and the deposit of dew was an every-day occurrence. I found the people very obliging and kind everywhere, their only defect, so far as I was concerned, being their inquisitiveness. If I only looked at a building, they began to look also; if I took out a note-book, I was surrounded; and when I sat down to draw, "Takener," "Takener," resounded on all sides, and it was with the utmost difficulty I could get a sight of the building I wanted to delineate. It was true they moved aside when pressed repeatedly to do so, but only to make room for others who, coming up to see what was the matter, took their place.

I shall divide my subject into three classes: first, the churches; secondly, the public buildings; and, thirdly, the shops and warehouses, private buildings, villas, and farm buildings. I put the churches first, not because they are the most interesting, for with one or two exceptions they are the least so compared with other countries, but because it is convenient to adopt an order I have followed in other cases. Unfortunately, I have but few illustrations to put before you. I have selected two plans from M. Narjoux's book, "Notes of an Architect's Trip to the North-west of Europe,"—the Groote Kerk of Rotterdam and of Amsterdam. The interior view of the former, also taken from M. Narjoux's work, will at once convey to your minds the poverty in the architecture of nearly all the churches in Holland. In the place of the stone vaulting which is necessary to complete the interior effect of the nave, we have a plain barrel-vault in wood, with the plainest tie-beam and struts. When to this we add that the tracery of the windows is of the poorest and most meagre kind,—generally in brick, glazed with common window glass,—the whole of the stonework whitewashed, and a large enclosure blocking up the nave and side aisles and extending sometimes into the transept,—this enclosure rising sometimes 12 ft. high to keep off the draughts from the congregation,—the total absence of any ancient fittings, the choir desecrated, and its floor green and damp, all these give some idea of the depressing effects of religious architecture in Holland.

In one or two of the churches the iron or brass grilles in front of the choir, dating from the seventeenth or eighteenth century, are still to be found; and at Dort and Enkhuisen are some of the most beautifully carved stalls (disused, of course) to be found out of Italy. It is said they were executed by Dutch artists; but, if so, their authors must have sojourned in Italy so long as to become thoroughly imbued with the Italian style. When I compare these stalls with those of Haarlem and Amsterdam, also very fine, but possessing the especial style of the Low Countries, I am constrained to believe that the artists of the stalls in the two first-named churches must have been Italian. I am in hopes it may be possible to obtain casts of these stalls at Dort and Enkhuizen for the museum at South Kensington. The more interesting churches of Holland are those of Bois-le-Duc, Utrecht, Goes, Kampen, and Haarlem. The last, built 1442, is noticeable for the size of its choir, which has the same number of bays as the nave. Here the roof (also in wood) has been treated in a more architectural manner. It is possible that the Dutch architects, taking for their examples the vaulted cathedrals of France, had intended to reproduce the stone vaulting, but fearing the too great weight in a country where the foundations are necessarily treacherous, they changed their minds at the last moment, and devised these wooden roofs. It is much to be regretted they did not come over and study our English churches, and especially those in Norfolk and Suffolk, where they might have found examples of decorative roofs thoroughly in accord with the style, and realising the artistic harmony of the whole building. The aisles, I should say, are frequently vaulted in stone.

At Bois-de-Duc the cathedral has always remained Roman Catholic. The interior thereof has retained its original arrangement, and had it not been subjected some thirty years ago to restoration, would have retained most of its ancient fittings. These are most of them sold, and replaced by new ones of paltry character; and we are fortunate in possessing, at South Kensington, the magnificent marble *jubé* which once formed the enclosure to the choir. Mr. Brewer, in his paper in 1876, described the church in detail, so that there is no necessity for my saying more than that the cathedral is one of first-class magnitude, and worthy of comparison with French and English cathedrals. It is about 400 ft. long, and consists of a nave of seven bays and double aisles, transept with aisles, choir of four bays, choir aisle, and a chevet with seven radiating chapels, an extra chapel on the north side, and an octagonal building, which Mr. Brewer suggests may have been a chapter-house. I did not visit Roermond, Breda, or Bergen-op-Zoom, to which Mr. Brewer refers, but the churches of Kampen and of Goes have both of them double aisles on each side of the nave. At Goes there are three apsidal terminations,—the central one in the prolongation of the choir, the other two in the prolongation of the double aisle. At Zierikzee, only the central chapel is emphasised; the other two are masked by the line of the external wall of the chapels of the nave and choir aisles being carried through. The Niewe Kerk, at Amsterdam, has seven chapels in the chevet, of which five are polygonal and two square. At Delft, the old church has apsidal terminations to the aisles and choir.

I said, in the earlier portion of my paper, that I should scarcely be prepared to advise students to make Holland their camping-ground. I think I should make an exception in favour of Utrecht, where the cathedral and archiepiscopal museum would well repay a visit to that country. Unfortunately only a portion of the cathedral remains,—the transept, choir, chevet, and the western tower. The intermediate part (the nave) fell down in 1674, and was subsequently entirely cleared away.

The drawings of the ruins, as they remained some twenty years afterwards, are to be seen in the museum of the town-hall. The eastern end of the cathedral dates from 1254 to 1257; it is beautifully proportioned, the tracery of the windows and all the carving being French in character and excellent in design and execution; the height of the choir is 115 ft. On the south side of the choir is a fine cloister, now undergoing fairly careful restoration. The western tower, 338 ft. high, is composed of three stories, the lower two square and in brick, and the upper one octagonal, and in stone; it was formerly surmounted by a stone spire, which brought the height up to 364 ft. This reminds me that I have made no reference hitherto to the church towers of Holland, which are especially noteworthy. It is singular that in a country where the foundations were so little to be depended on, they should have ventured to raise such enormous and weighty structures; they trusted probably to the great thickness of walls, and their being tied in at various levels. In more than one case, however, and notably at Delft and Dort, the towers are considerably out of the upright. Besides those at Dort and Utrecht, of which I have here drawings, I am able to show you an old print of the tower of the church of Zierikzee, in South Holland, one of the most formidable structures ever conceived. Had it ever been completed it would have exceeded by over 100 ft. the height of the spires of the cathedral at Cologne. The print shows the tower as it was intended to be, and as actually built, with the church adjoining, from which it seems to have been detached, possibly owing to the fear that, if it were to sink, it might drag the church with it. The base of the tower measures about 76 ft., including buttresses. The church, shown by the engraving, no longer exists, and has been replaced by a modern Palladian structure.

The most beautiful tower in Holland is that of St. Vitus at Leeuwarden, a fifteenth-century structure of stone and brick of two colours. Doubtless time has mellowed the tones of the surface, but the introduction of yellow brick here acts as a sort of intermediary between the red brick and the stone, and is extremely happy in its effect, and worthy of imitation. The too great difference in colour between brick and stone, especially when the latter is sparingly used, as in the tower of Dort, is always objectionable. When, however, a third colour somewhat between the two is introduced, it acts as a harmoniser, and, to use a painter's phrase,

"pulls the thing together." The base of this tower is 64 ft., including the buttresses, which are 9 ft. deep and 7 ft. wide, so that you can get some idea of its size. Unfortunately, the church to which it was attached exists no longer. There are several other towers of note, such as those at Zwolle, Enkhuizen, and others, of which I have no large illustrations. The Nieuwe Kerk at Delft has a fine lofty tower with two stories, square on plan, and two above them octagonal and crowned with a spire. The tower close by, belonging to the town-hall, is also good; it has its bells hung outside the belfry windows,—a peculiarity often found in Holland. At Gouda there is a very fine series of stained-glass windows (twenty-nine large and thirteen small), executed between the years 1553 and 1606. The subjects are Scriptural, with the figures of saints and of the donors. They have, however, too much line-drawing in them to be perfectly satisfactory to my mind, and seem to bear the same relation to fine coloured glass as a coloured print would to an original picture. I ought also to call attention to two remarkable fonts in brass, one at Bois-le-Duc and the other at Zutphen. At Zutphen the base is carried on six lions; the leg or stem of the font is smaller, and decorated with small figures in niches; and the cover is hexagonal, equally rich as, and somewhat similar to, the cover at Bois-le-Duc.

I come now to the public buildings. With the exception of Middleburg, the town-halls of Holland are far inferior to those of Belgium. A few of them, such as those at Gouda, Alkmaar, portions of Haarlem, at Veere, and Zierikzee, date from the fifteenth and sixteenth centuries, but are extremely simple; one of the richest façades, and typical of the picturesque though debased style of the seventeenth century, is the town-hall at Leyden. The town-hall at Middleburg, built in 1468 by Charles the Bold, presents a fine front of some 200 ft. to 250 ft., with lofty gables at each end of the main façade, which consists of ground and first floor with a lofty roof. The lower portion of the building is comparatively plain. The wall between the windows of the first floor is covered with canopies, with colossal statues of the Counts and Countesses of Flanders. In the centre behind the main block is a lofty tower with belfry. The style of the whole building is Flamboyant in character, with rich tracery in the windows, the walls above the windows of the first floor and in the gables above them being covered with rich blank tracery.

The older portion of the town-hall at Haarlem was originally the palace of the Counts of Holland. Leading out of the picture-gallery is an ancient room, with its fittings and furniture, of the seventeenth century, more or less uninjured, and this room and the court-room of the town-hall at Kampen are the most interesting specimens of interior decoration to be found in Holland. Round the lower portion of the former room runs a dado about 9 ft. high, in oak, considerably darkened by age, enriched with deep-sunk panels, Jacobean pilasters, and cornice; the walls above being simply white, with portraits in black ebony frames hung upon them, and ancient armour, blue and white china dishes, and flags. The roof is a pointed barrel vault in dark-coloured wood, with a single truss, consisting of tie-beam and arch in centre of room, both tie-beam and arch being moulded and carved.

In the town-hall at Kampen there is a similar dado round the room,—the lower portion brought out to form a seat, the upper portion decorated with detached Corinthian shafts and cornice complete, the spaces between the shafts having small arcades filled with inlaid wood stained in various patterns. Across the centre of the room, and the same height as the dado (about 8 ft. or 9 ft.), is a screen similarly decorated to the dado, the arcades in this case, however, being pierced. On the outer room side is a bar of wood, before which it is said the counsel used to plead, and hence the expression being "called to the bar." I think it is more likely it was placed to keep the public off the screen, and that the counsel pleaded where he could be better heard, viz., in the inner room. In this inner room, at the further end, is a magnificent canopy over two seats, very much like the stalls of a cathedral, in which the judge and chief burgomaster sat. This seat, and a case or cupboard on the other side of the chimney-piece, are beautifully carved. The chimney-piece, which is of earlier date (A.D. 1543), is the finest in Holland. Here, as at Haarlem, the wall above the dado is white; there is a fine panelled ceiling in wood, the ribs of which have a peculiar ogee curve, of which I never remember to have seen an example before, and which gives a pleasing effect in the play of light and shade. These two rooms at Haarlem and Kampen may be taken as the types of the finest interiors in the national style of Holland. The wood panelling, now almost black with age, and the white wall above, present a powerful contrast, and give the cue for its subsequent decoration. By the sides of the windows are green or red curtains; they are of thin material, intended rather to break and diminish the light than to exclude it; these, when partially drawn, throw rays of bright colour on the white walls of the room, on which are hung portraits of rather sombre colour in black ebony frames and brightly burnished armour. On the shelf formed by the cornice of the dado are placed specimens of the blue and white Japanese ware (which have been so much prized for their simple effects of colour by the Dutch for the last 200 years, and have been so largely imported from Japan). Brass chandeliers and sconces, and other metal utensils, furniture of rich inlaid work, and chairs and couches covered with rich embroidered Utrecht velvet, present an *ensemble* of rich deep colour, the effect of which must be seen to be thoroughly appreciated. The pictures of De Hooghe and Metzu in the Old Masters Exhibition at the Royal Academy (now just closed), and at the National Gallery, representing the interiors of more ordinary apartments than those just described, will show how much effect can be obtained by the simplest colours. The floors of these rooms, I should say, are generally in oak on the upper floors; on the ground floor they are invariably paved in brick or marble. The chief decorative feature in the ordinary Dutch house is the chimney-piece, generally made in wood, painted a dark colour, rising to the ceiling, with a shelf on which, even in the most ordinary dwellings, will be found a range of blue and white plates. The chimney opening is, of course, entirely lined with Dutch tiles.*

GENERAL CONFERENCE OF ARCHITECTS IN LONDON, 1881.

The Council of the Royal Institute of British Architects have approved the following arrangements for the approaching General Conference of Architects of the United Kingdom, namely:—

Friday, 6th May, 8 p.m.—Opening Meeting of the Conference; Reception by the President and Council; Presidential Address.

Saturday, 7th May, 11 a.m.—Conference Second Meeting; Papers on "Quantities;" &c. 6.30 p.m., Institute Dinner.

Monday, 9th May.—Visits to New Buildings, &c. 8 p.m. Annual General Meeting, Reports of Council, Election of Officers, Election of Board of Examiners under Metropolitan Building Act, &c.

Tuesday, 10th May.—Visits to New Buildings, &c. 8 p.m., Conference Third Meeting. Discussion of the Papers on "Quantities."

Wednesday, 11th May, 11 a.m.—Conference Fourth Meeting. Reports and Papers on "Architectural Competitions." 8 p.m., Conference Fifth Meeting, Discussion of the Papers on "Architectural Competitions." 8 p.m., Conference Sixth Meeting, Papers on some Subject of Artistic Character.

Thursday, 12th May.—Visits to New Buildings, &c. 9 p.m., Conversazione.

The Conference General Committee have, with the approval of the Council, invited the assistance of several members, who, as sub-committees, will take charge of the different subjects to be discussed, visits to be made, or meetings to be held. The deliberations on "quantities" will be superintended by a sub-committee composed of J. T. Knowles, Member of Council; Charles Fowler, Fellow; and J. Douglass Matthews, Fellow. Those on "architectural competitions" by a sub-committee composed of Cole A. Adams, Fellow, and Thomas Porter, Fellow. Forming the sub-committee for the conversazione are Thomas W. Cutler, Fellow; R. Phené Spiers, Fellow; and Hugh Stannus, Associate. Forming that for the visits to new buildings are Cole A. Adams, Fellow; T. Roger Smith, Fellow; and T. H. Watson, Fellow. Forming the dinner committee are Oct. Hansard, Member of Council, and C. J. Phipps, F.S.A., Fellow. The secretaries will be happy to afford information, as regards the Conference, to members and others who apply for further particulars.

The Anglo-American Agricultural Company (Limited).—This company has been formed for the purchase, stocking, development, improvement, re-sale and letting of land in Russell, Marion, and McPherson counties, on the lines of the Kansas Pacific, and the Atchison, Topeka and Santa Fé Railways, in the Southern part of Kansas, United States, and of such other lands as may be deemed most profitable for colonisation, stock-raising, and general agriculture; for the purpose of making loans upon the security of improved farms; and the furtherance of the other objects mentioned in our advertising columns. The list of directors includes some excellent names.

* To be continued.

ARCHITECTURAL ASSOCIATION.

DUTCH OR "QUEEN ANNE" ARCHITECTURE.

At the fortnightly meeting of this Association, on the 18th inst., Mr. Ernest C. Lee, President, in the chair, the following gentlemen were elected members, viz.,—Messrs. F. A. Hewer, W. Aston, C. A. Bovill, W. R. Hobson, H. A. Gregg, B. Dicksee, E. G. Hardy, W. Dewes, J. T. Müller, R. Guy, G. Hubbard, J. Hart, and T. W. Parkes.

On the motion of Mr. Eales, a vote of thanks was given to Messrs. H. Saxon Snell & Sons for the facilities afforded to the members of the Association on the occasion of their visit, a fortnight ago, to the new Marylebone Infirmary (described in last week's *Builder*); and it was announced that this Saturday, the 26th, a visit would be paid to Exeter Hall.

The following communication, addressed to the secretaries of the Association, was read,—

"We, the undersigned members of the Architectural Association, desire that you will, at an early date, summon a special business meeting to consider and discuss the desirability of increasing the entrance-fee. Taking into consideration the numerous advantages offered by the Association, and the additional inducement which the proposed studentship will present for new members to join our ranks, the present seems a favourable time for raising the entrance-fee. We therefore propose that in Rule XVII. the words 'one guinea' shall be substituted for 10s. 6d. It is not, however, intended that this alteration shall be made until the commencement of next session.—We are, yours very truly,

E. B. I'Anson, R. Phené Spiers, G. R. Redgrave, T. E. Colcutt, S. Flint Clarkson, R. E. Pownall, H. Tanner, M. Halbert, Hugh Stannus, A. Conder, Aston Webb, R. Henry."

It was announced that in compliance with this requisition a special business meeting would be held on Friday, April 1st, at seven o'clock.

Mr. Phené Spiers then read a paper on "Holland," the first portion of which we print.

The Chairman, in inviting discussion, said that while Holland undoubtedly contained a great deal of picturesque and interesting work, from which useful hints could no doubt be obtained by those who had to do "Queen Anne" work, the country was hardly one to which the Association would send their travelling students.

Mr. H. W. Brewer said that Mr. Spiers had visited a part of Holland with which he (Mr. Brewer) was not well acquainted, but he could, nevertheless, endorse to a very great extent most of the observations which the paper contained on Holland and its architecture. He thought, however, that Mr. Spiers had not sufficiently taken into consideration the circumstances under which most of the churches of the country were erected. They nearly all appeared to have been built during the fifteenth and early part of the sixteenth century, and the Dutch architects of that period had to contend with very much the same conditions that most architects of the present day had to contend with, viz., they were often called upon to erect large buildings with very inadequate means. As, with the exception of Bois-le-Duc and Utrecht, the churches of Holland were very much less costly than those of France or Germany, we ought not to expect the same richness of detail in them as was found in the churches of the last-named countries. The towns of Holland were very full of lofty houses and large public buildings at the time the churches were erected, and it was evidently the aim of the Dutch architects to make their churches as large and imposing as possible by loftiness of construction and boldness of outline, necessarily with very little detail. The effect of these churches was, though simple, very pleasing, and it must have been more so when they were filled with the furniture which had now so largely disappeared. Mr. Spiers had not mentioned the great hall of the palace at the Hague, which was 180 ft. long and had a span of 60 ft., the roof being somewhat similar in construction to that of Westminster Hall. The hall at the Hague was probably a century earlier than that of Westminster, and if the roof was coëval in date, it must belong to the middle of the thirteenth century. It is a good example of the hammer-beam type, but very plain. It was a roof unlike any other in Holland. As Mr. Spiers had shown, the Dutch people unfortunately seemed to have a great hatred of anything like picturesqueness in colour, and therefore everything was continually being painted or washed down. Lichen and moss, which so often added a charm to an old building, were apparently hated with the whole of his heart by the Dutchman.

In conclusion, Mr. Brewer moved a vote of thanks to Mr. Spiers for his paper.

Professor Kerr expressed his pleasure in having heard so excellent a paper read before the Association, and he felt almost inclined to ask why it had not been read upstairs, before the Institute. A more dignified paper, and one more lavishly illustrated and more intellectually laid before a meeting, he did not think he had ever listened to. Mr. Spiers's paper was not to be regarded as an endeavour on the part of a traveller to produce something from an hitherto undiscovered source which should equal all that had been produced from other sources. Mr. Spiers had been led, no doubt, by a desire to comprehend, if he possibly could, the reason for the introduction of the "Queen Anne" style into this country, and to seek in Holland (which might be regarded as the cradle of that style) some of the most characteristic specimens, and he had apparently succeeded in finding them. Perhaps our Queen Anne work was rather better than some of the Low Dutch buildings. It was rather surprising to find so much genuine picturesqueness in Dutch architecture when, as Mr. Brewer had said, the Dutch people seemed to have a horror of the picturesque. But if the Dutch or Queen Anne architecture was not picturesque, what was it? Although in a great deal of it there could not be found art of the highest order, it yet contained some very good art of its kind,—some very suggestive design. Architectural design, it should be borne in mind, was not a matter of caprice or hap-hazard, but it sprang philosophically from the peculiar conditions of locality and time. The architecture of Holland was just such as might have been expected from its circumstances. Therefore, when we in England of the present time, situate as we were in entirely different circumstances, adopted this Low Dutch style for our purposes, were we not doing wrong? Except for the mere production of fantastic display, the architectural productions of Holland must be entirely unsuitable for imitation by us. The fact was that in the present day we were in a condition of strange transition with regard to artistic taste, but we were not to be dissatisfied with what we were doing, or to feel that we were altogether following in the path of the blind. What we were doing now was the result of its own causes, and we must, therefore, accept that result, and make the best of it while it lasted. We must look forward, however, to the question whether that which was to come was to be an improvement or the reverse. For his own part, he hoped that the so-called "Queen Anne" movement would prove to have been a stepping-stone between Gothic secular architecture,—which had now had its day and passed out of favour,—and that as he thought superior style, especially for modern secular work,—the Renaissance. The picturesqueness which we were seeking in the present day under somewhat desperate circumstances by following the Low Dutch manner was simply what followed out of our desire, while forced by the exigencies of modern times, to advance with a certain clinging to the picturesque, as we were now doing. That, perhaps, speaking as the historians of architecture would speak in the next generation, was the present state of things. Such architectural works as were to be found in Holland were not to be taken as models for study and reproduction, but in so far as they were represented by the Queen Anne movement they should lead architects to take courage and hope for better things ere long.

Mr. Thomas Blashill, in seconding the vote of thanks to Mr. Spiers, thought that the meeting had great reason to thank that gentleman for his interesting discourse. The Association was to be congratulated on having been made the medium for making public to the profession so interesting a communication.

Mr. W. Hilton Nash said that Mr. Spiers had rather sought to dissuade young architects from going to Holland, but all who had heard his paper would be desirous to go on the earliest opportunity. The architecture of Holland was, no doubt, peculiar, but it presented some features which might be used by English architects in the present day with great effect. He thought that one reason why the brick architecture of Holland and Belgium was so effective was that the bricks were not so thick as those in use in this country, being about 8 in. by 4 in. by 2 in. This enabled the Dutch builders to impart to their buildings a sort of piquancy which was unattainable by the use of ordinary bricks. Until we, in this country, altered the size of our bricks, we should never, he thought, get good brick architecture.

The Chairman having put the motion for a vote of thanks to Mr. Spiers, it was, of course, carried unanimously; and Mr. Spiers, in replying, expressed his indebtedness to Mr. Brewer for lending him a number of water-colour drawings in illustration of the paper.

It was announced that at the next meeting, to be held on the 1st proximo, Mr. L. C. Riddett would read a paper on "Settlements," this subject being in lieu of that of "Swimming Baths," previously announced.

TRANSFORMATION AT EXETER HALL.

EXETER HALL, built just fifty years ago, from plans by Dering, the architect, and subsequently altered, so far, at any rate, as the roof is concerned, from plans by the late Mr. S. W. Daukes, will celebrate its jubilee on Tuesday next, by being publicly dedicated to a new career of usefulness. The property seems to have had a narrow escape of being sold last year as the site of one of the ever-increasing number of theatres; but six gentlemen, by whom the associations of the place were warmly cherished, managed to save the building from such a fate, purchased it for 25,000*l*., and presented it to the Young Men's Christian Association, by whom it will be used as the head-quarters of their operations. The alterations which have been effected in the building are considerable, and have entailed an outlay, including furniture and fittings, of about 18,000*l*. The works have been carried out under the direction of Mr. Alfred R. Pite, architect. Plans of the ground-floor and large hall as proposed to be altered were published on p. 333 (Sept. 11, 1880) of our last volume, and the plans as then put forward have been in the main adhered to. The aspect of the large hall has not been materially altered, the roof remaining untouched, even as to the decoration, though the walls have been re-decorated. The gradient of the floor line has, however, been lowered, so that the rise from front to back is not so great by about 5 ft. as was formerly the case, and the western gallery has been brought forward a few feet, the front of the gallery consisting of an ornamental lattice girder decorated in gold and colour. The organ remains *in situ*, although the orchestra has been reconstructed, mainly on the old lines, but with a lessened declivity from front to back, and with a new approach staircase on either side. In connexion with the platform or front of the orchestra, a great improvement has been made in the accommodation for the reporters. The reporters' box which previously existed only afforded room for five or six persons, no one of whom could enter or leave without disturbing the others. The new box for the reporters extends along the greater part of the front of the platform on the floor of the hall, and there is accommodation for about a score of note-takers, with convenient means of ingress and egress. All the old oak seats in the body of the hall and on the orchestra have been altered so as to be more comfortable to their users. An important part of the work has consisted in the provision of two new staircases giving access to the hall and its gallery. These staircases are situated at the north-west and south-west ends of the hall, abutting on Exeter-street, and are executed in Allen's patent fireproof concrete, as used in the buildings of the Improved Industrial Dwellings Company. The grand staircase, that approached from the vestibule at the Strand entrance, has been considerably improved and enlarged, while the old staircase at the east end of the building, coming up behind the orchestra, has also been improved, and fitted with Hawksley's patent treads. As the plans show, however, it is on the ground-floor that the greatest changes have been made. Here, by means of partitions solidly executed in pitch-pine joinery, and filled as to their upper parts with embossed glass of good design, a great deal of light has been thrown into corridors and rooms that were formerly dingy and dark. The ground-floor will be mainly used by the members for what may be called club purposes, there being a reading-room to accommodate 250 persons, a parlour or conversation room for 150, a coffee and dining room for 250, a buffet, reference library, and other apartments. The largest apartment on the ground-floor is what is known as the Lower Hall, and here the improvement which has been made is very notable. The hall has been enlarged by taking in the width of the old corridor, to hold about 700 persons, including the seats in the gallery, which runs round three sides of the hall. The hall is oblong in shape, the platform being placed in the centre of one of the longer sides of the room, so that the gallery extends along the opposite side of the hall and returns at the two ends. In the basement, hitherto used as a beer-cellar, great improvements have been made, and light has been let into the various class and lecture-rooms here provided by cutting openings in the main walls of the building, which are here more than 3 ft. thick, the brickwork being of excellent quality. The execution of the work has not entailed the slightest appearance of settlement. Special attention has been paid to the arrangements for warming and ventilation, which have been carried out by Mr. W. W. Phipson. The iron girders and columns have been supplied by Mr. Archibald D. Dawnay; the ornamental ironwork on staircases and platform in lower hall, by Messrs. Hart, Son, Peard, & Co.; the locks by Messrs. Hobbs, Hart, & Co.; the gas-cooking apparatus by Messrs. Z. D. Berry & Co.; the lavatories, urinals, water-closets, and sanitary apparatus generally by Mr. Bostel, of Brighton; the decorations by Mr. Homan; the tiles in corridors by Messrs. Macoolla; the gas-fittings by Messrs. Deville & Co.; and the general furnishing by Messrs. Bywater, Perry, & Co. The contractors are Messrs. Higgs & Hill, whose foreman has been Mr. Seward, the shop-foreman of joiners being Mr. Priestnall. The floors of the basement are paved with wood blocks on Gregory's patent. The whole of the work is creditable to all concerned in it. The architect has been ably represented by Mr. Brady, the clerk of works.

VALUE OF CITY PROPERTIES.

BUDGE-ROW, BARBICAN, AND FENCHURCH-STREET.

A BLOCK of freehold buildings in Budge-row, Cannon-street, was offered for sale last week, at the Auction Mart, by Messrs. Marsh, Milner, & Co. It consisted of business premises and offices, covering a ground-area of about 1,240 ft., with a frontage to Budge-row of 20 ft. The building contains five floors and a spacious basement, and is at present in the occupation of Messrs. Le Blond & Co., wholesale stationers, whose lease expires in June next. The premises were stated to be substantial and in good repair, but the auctioneer observed that the increased value of the site was suggestive of the erection of a superior class of building. Mr. Milner, the auctioneer, in submitting it, remarked that the value of property in the locality was increasing day by day. He could remember the time, not very many years since, when property in Budge-row was not worth half as much as it was at present, and still the increase was going forward. The first offer was 6,000*l*., and 8,000*l*. having been reached, he declared it an open sale. Some spirited bidding followed, and ultimately the property was sold for 9,250*l*., being at the rate of 7*l*. 10s. per foot.

On Friday, the 18th, Mr. G. A. Wilkinson submitted for sale, at the Auction Mart, by order of the trustees under the will of the late Mr. Jonathan Bartlett, the spacious freehold business premises in King's Head-court, Barbican, known as Barrett's Brass and Iron Foundry. In addition to the foundry buildings, the premises consist of a front shop and warehouse above, and altogether occupy a superficial area of 6,800 ft. The property is let upon lease for the residue of a term of fifty years, which expires in June, 1884, at a rental of 125*l*. a year, the auctioneer observing that the purchaser would therefore come into the rack rental value of the property in a little over three years' time. The sale-room was much crowded, the company present including several gentlemen connected with the iron and brass foundry business. There was a close competition for the property, which was put up at 1,500*l*. The biddings, however, were for the most part confined to two gentlemen present, each of whom appeared resolved to become the purchaser, and who for some time rapidly bid against each other, bringing the property up to 4,760*l*., at which it was ultimately sold.

On the same day, Messrs. Hards, Vaughan, & Jenkinson offered for sale, at the Auction Mart, a recently-erected block of buildings, having frontages to Lime-street and Fenchurch-avenue, and leading to Fenchurch-street, Billiter-street, and Leadenhall-street, by the new broad thoroughfare which has just been constructed. The property offered consisted of two buildings,

No. 47, Lime-street, and No. 1, Fenchurch-avenue, erected within the last few years from the designs of a well-known architect, and described as being most substantially built, and having handsomely carved stone fronts decorated with polished granite columns. The buildings were said to cover an area of 4,547 ft., with a frontage to Lime-street of 92 ft., and a return frontage to Fenchurch-avenue of 57 ft. It was announced that the greater portion was let off in suites of offices on leases, producing rentals amounting to 3,898*l.* per annum. The Fenchurch-avenue portion of the premises is held from the Fishmongers' Company for eighty years from 1876, at a ground-rent of 1,250*l.* per annum; and the Lime-street block is held from the trustees of Bethlehem Hospital for the same term, at a ground-rent of 400*l.* per annum, leaving an annual profit rental of 2,248*l.* The property was bid up to 23,800*l*, and there being no further advance, the reserve was declared to be 26,000*l*, at which it was withdrawn.

THE ARTISANS', LABOURERS', AND GENERAL DWELLINGS COMPANY'S ESTATES.

FROM the proceedings at the annual meeting of the Artisans', Labourers', and General Dwellings Company, which has just been held, under the presidency of the new chairman, Mr. Ernest Noel, M.P., it appears that the total number of houses completed and occupied up to the present time on the Shaftesbury Park Estate at Batterses, and the Queen's Park Estate, near the Harrow-road, is 2,447, the gross annual rental of which for the year ending December last, was 46,190*l.* The report stated that the number of houses on the Shaftesbury Park Estate was 1,199, producing a gross rental for the year of 22,908*l.*, and ground-rents 744*l.* On the Queen's Park Estate they had erected and brought into tenancy during the year 354 houses, bringing the total number of completed houses to 1,248, and 252 more were in course of erection. The gross rental of the estate had increased from 17,222*l.* on December 31st, 1879, to 23,282*l.* for the year ending the 31st of December last. The report gave a much less favourable account of some of the other outlying and provincial estates belonging to the company, which were stated to be at present unprofitable. After deducting the preference dividend, and the interim dividend of 2 per cent., there remained 18,816*l.* available for division, and the directors recommended a further dividend of 3 per cent. on the ordinary shares. The chairman, in moving the adoption of the report, which was carried, expressed the regret of the directors at the retirement from the chairmanship of the Hon. Evelyn Ashley, in consequence of his appointment as Parliamentary Secretary to the Treasury, but they were happy to say that he retained his seat at the Board.

PATENT RECORD.*

APPLICATIONS FOR LETTERS PATENT.

924. H. J. Harrison, Liverpool. Strengthening cast-iron pillars, girders, &c. March 4, 1881.

926. G. Maw and A. Maw, Broseley. Decorating bricks, tiles, pottery, &c. March 4, 1881.

928. A. E. Lucas, Hatton-garden. Ball-valves. March 4, 1881.

934. T. Hyatt, Kensington. Core or skeleton metals for the construction of fire-proof buildings, &c. March 4, 1881.

954. J. Taylor, Clapham. Paving. March 5, 1881.

969. R. Crane, Clapham. Grates for burning anthracite coal, and consuming the smoke. March 7, 1881.

979. F. McIlvenna, Liverpool. Displaying articles in shop-windows, partly applicable as fastenings for window-sashes. March 8, 1881.

1,025. J. Peer, Salford, Lancashire. Steam generator and other furnaces and firegrates. March 10, 1881.

1,026. S. Rideal, Manchester. Construction of buildings, &c. March 10, 1881.

1,033. G. Hunter, Leeds. Consuming smoke. March 10, 1881.

1,034. F. Duray, Ecaussines, Belgium. Generators of steam, also applicable to heating purposes. March 10, 1881.

* Compiled by Hart & Co., Patent Agents, 28, New Bridge-street, E.C.

1,038. W. R. Lake, Southampton-buildings. Water-closet apparatus (com. by A. Edwards, Philadelphia, U.S.A.). March 10, 1881.

NOTICES TO PROCEED

have been given by the following applicants on the dates named:—

March 8, 1881.

4,518. H. Seward, Queen Victoria-street. Disinfecting closet-pans, drain-pipes, &c. Nov. 4, 1880.

4,531. T. Archer, Gateshead. Steam hoists. Nov. 5, 1880.

4,545. W. Stainton, King's-cross. Pipe couplings. Nov. 6, 1880.

136. W. Page, Lambeth. Constructing slabs for paving. Jan. 12, 1881.

254. L. W. Sutcliffe, Birmingham. Self-feeding and smoke-consuming furnaces. Jan. 20, 1881.

440. T. Jackson, Edinburgh. Apparatus for supplying, heating, and circulating water. Feb. 2, 1881.

581. F. Edwards, Great Marlborough-street. Slow-combustion smoke-consuming grates. Feb. 10, 1881.

709. J. W. Butler and M. Dale, Westminster. Concrete or cement pipes. (Com. by C. A. Berthelet, Milwaukie, U.S.A.) Feb. 18, 1881.

March 11, 1881.

4,208. H. Phillips, Heavitree. Urinals. Oct. 15, 1880.

4,540. R. H. Reeves, Parkhurst. An apparatus for detecting the escape of gases from drains. Nov. 5, 1880.

4,585. W. S. Melville, Mile-end. Supplying fuel to domestic fireplaces. Nov. 9, 1880.

ABRIDGMENTS OF SPECIFICATIONS

Published during the Week ending March 12, 1881.

2,922. W. E. Rendle, Westminster. Glazed roofs.

Carries the sheets of glass in the following manner. The upper ends rest on a horizontal purlin. The lower ends are received in a trough formed in bent sheet metal bars secured to another horizontal purlin. These bars are attached to the upper side of the purlin, and leave a flat face, against which the back of the lower ends of the sheets of glass may rest; they are then bent back at right angles, and again have three more right-angled bends formed in them, so as to form a kind of trough along the bottom of each bar. The bottom of this trough rests on the surface of the lower sheet of glass, and the upper sheet is overlapped by the last bend of the sheet metal bar. Between the side edges of the sheets of glass are fitted bars, made with a flat strip to lie down above the glass, and a central stem between the sheets, at the sides of which are formed troughs. July 15, 1880. Price 6d.

2,931. J. Hayes, jun., Pentonville. Facilitating the removal of window-sashes.

Uses one double sheave pulley to clear the sliding pocket. Half the pulley-style is cut from the inside lining and parting bead to the height of the sash, which forms a sliding pocket. This is opened and closed by an eccentric or lever motion, actuated on the inside lining by a key. July 16, 1880. Price 6d.

3,153. T. W. Helliwell, Brighouse. Water-closets.

The discharge-pipe terminates in a chamber communicating with the sewer, and it has a hinged valve fitted at its termination. A flushing cylinder is provided between the tank and the closet, provided with a valve at each end on the same spindle, and so arranged that when one is open the other is shut. When water is required the handle is pulled, the inlet valve of the flushing cylinder is closed, the outlet valve is opened, and the water flushes through the basin down the discharge-pipe into the sewer, opening the hinged valve on its way. When the water has passed this latter valve again closes, and when the handle is released the flushing cylinder is again filled from the tank. July 31, 1880. Price 4d.

3,139. W. Holcroft, Stourbridge. Kilns for drying and burning bricks, &c.

The object is chiefly to secure greater uniformity of heat all over the kilns. The fireplaces and flues are so arranged that between each two of the ascending flues on the one side of the kiln there is a descending flue from the fireplace on the opposite side. The fireplaces are also connected with longitudinal flues under the floor of the chamber. The end fireplaces and the end flues are also combined with divided flues in the entrance of the "wicket" ends. July 30, 1880. Price 8d.

3,130. A. M. Clark, London. Producing designs upon glass.

The glass is coated in a dark room with "enamel collodion," which is composed of 1,000 grammes of water, 10 grammes of honey, 40 grammes of glucose, 20 grammes of gelatine, and 18 cubic centimètres of a solution of bichromate of ammonia of potash. The design is then printed from a positive, and developed by enamel or glass powder. It is then fixed by being exposed to a high degree of heat. (Com. by D. Scotellari, Paris.) (*Pro. Pro.*) July 29, 1880. Price 2d.

3,279. F. A. Harrison and C. Priestland, Birmingham. Pulleys for cords of blinds, &c.

In the usual slide or frame is placed a nut, into which the stud on which the pulley turns is screwed. To fix the pulley the stud is turned until it presses against the back of the frame, and thereby clamps the nut against the front of the slide or frame. August 11, 1880. Price 6d.

"LIME AT THE WHARF OR JOB."

SIR,—Having some twenty-five years since, in the presence of my then employer, a builder in Thornhill-square, seen two yards of lime tested under the conditions mentioned by "A. A.," I can only say that he *cannot expect that his lime will measure the same when unloaded as it did before.* The journey has shaken it, and broken the large lumps into smaller pieces, consequently they lie closer together; there would also be some waste in dust.

At the time I refer to, my employer noticing the short measure of the lime when unloaded, I accompanied him to the wharf (Messrs. Coles & Shadbolt's); the lime was filled into a half-yard measure, and thence into the cart, taken to the works (about a mile), unloaded into the same measure, and proved fully a quarter of a yard short. J. W.

STATUARY, BLACKFRIARS BRIDGE.

SIR,—It is unfortunate that the forthcoming competition for the statuary for Blackfriars Bridge should have been made to occur at that time of the year when sculptors are most busy preparing their works for the Royal Academy Exhibition. It would be a wise step on the part of the Committee of the Bridge House Estates to consider this, if they wish to have a competition worthy of the prizes they have offered. By all means, let them postpone the day for sending in the designs until the end of June, or about three months after the reception of works at the Royal Academy. I know, as a fact, that the competition will be augmented, and the designs will duly receive from the artists the study they deserve.

I hear of one manufacturing firm, who employ talent, preparing designs for the above competition. I trust the award will be made to artists only.

A NON-COMPETITOR.

DRAWING ON PARCHMENT.

SIR,—I have lately had occasion to copy several plans on parchment, and I have invariably pricked them through; but I have come across one which has been put on to parchment without pricking through, and I do not think it can have been traced on carbonic paper, because some of the lines are so close together that tracing would be almost impossible. I shall feel very much obliged if any of your readers will tell me whether there is any other mode of transferring plans to parchment than these two.

I find a difficulty in colouring plans on parchment, the colour running a great deal. Can you give me a hint how to prevent this? Also, whether it is best to mix Indian ink every time you want to use it, or purchase it in the fluid state. I have found the latter become almost too thick to make a fine line with it. C. W. C.

BOILER EXPLOSIONS.

SIR,—The letter from Dr. F. Creswell Hewett, at p. 357, very correctly and concisely describes what is generally considered as the best style of hot-water pipe-fittings in regular use.

His third paragraph, however, discloses room for one improvement which might be made, still keeping all the others as described. This improvement is in connexion with the carrying of "the cold supply direct from the *cold*-water store-cistern into the boiler." Now this supply to the boiler being "cold," leaves it more liable to freeze than if it were warm, which could be often easily secured by putting in a small hot-water cistern alongside the cold store-cistern, and taking the down supply to the boiler out of it, and also bringing the hot expansion-pipe back into it. This would keep *all* the boiler-pipes warm, and whenever it was wished to see if the pipes were all clear in the circulation, as in the case of the fire getting out, then by either pouring water down one pipe and observing if it rose up the other in this hot cistern, or by some equivalent examination, it could easily be seen if all was safe. W. P. BUCHAN.

SIR,—The discussion as to the bursting of kitchen-range boilers through frost or stoppage appears to me not yet exhausted, and I shall treat the subject impartially, for the benefit of all parties. Valves and pressure-gauges should be fixed on all bath boilers; for, should a boiler be not used for a day or two during severe frost, the cook cannot tell whether the pipes are frozen; but should there be a pressure-gauge, which may terminate on the mantel-piece, it will always point to one pressure. If the tank is 60 ft. above, the boiler would show a 30 lb. pressure. If the pipes in the boiler are frozen, the gauge will show a less pressure, and warn the cook. If a boiler is not regularly cleaned, the fur will collect, and stop the pipes, therefore a safety-valve and pressure-gauge would prevent accidents. I have seen valves regulated from 30 lb. to 60 lb. pressure, suitable for these boilers, at Messrs. Stidder & Co.'s, London.

With respect to the systems of bath-fitting called the one-pipe Yankee and the two-pipe flow and return to tank in roof, the following severe test would convince:—Fix in the open air during a severe frost, say 20° Fahr., a boiler, with a tank 30 in. by 18 in. by 20 in. deep, with two 1-in. pipes flow and return, to be 25 ft. high; let the fire be well up for four hours, then the tank will be about 200° Fahr.; rake out the fire, the large body of water would circulate in the pipes six hours before the pipes would be frozen.

Let the same trial be used for the standing pipe of the Yankee system. I would say in two hours after the fire was raked out the pipe would be frozen, and the boiler would burst on relighting the fire.

Another disadvantage is that the hydrostatic pressure on the Yankee tank in the kitchen requires it to be made ¼ in. thick, or three times stronger than a tank on the roof, at a cost of 5*l.* extra.

The greatest disadvantage is that the branch-pipes to the lavatory, and the stand-pipe, being stagnant and cold, about 1 gallon of cold water has to be drawn before hot water can be obtained; whereas when a pipe is fixed from a tank in the roof, the velocity being greater, hot water can be had without loss of time. There can be no question but that the old English system is not only the best plan, but much the cheapest. JOHN ELDRIDGE.

CASE UNDER METROPOLITAN BUILDING ACT.

CONCRETE OVER SITE.

AT the Hammersmith Police Court on the 18th inst., Mr. J. Brown appeared before Mr. Paget in answer to a summons which had been taken out by Mr. Knightley, District Surveyor for Hammersmith, to show why he had not covered the surfaces of sites of six houses in Brackenbury-road with 6 in. of "good concrete," as required by the by-laws under the Metropolitan Building Acts, 1855 and 1878. The defendant was represented by Mr. Kisch, solicitor, and alleged that the work was already done. Mr. William Holditch Stevens, the District Surveyor's assistant, said that about the 12th of February the ground surface beneath one of the back-rooms was done as a specimen, and the material was approved, but the remaining sites were either not covered at all, or merely with loose brick rubbish, or burnt ballast with a deficiency of lime. Although the defendant several times promised attention, the floor-boards were ultmately laid without regard to this promise, and further means of inspection were at an end.

A witness was called for the defence, who said he had mixed the concrete and could use as much lime as he pleased, admitting that in some places the said concrete was not 6 in. but 4 in. in thickness.

Mr. Paget said even this would be wrong, and asked why, if the concreting had been done at all, the floor-boards had been nailed down to prevent the District Surveyor from seeing it. He made an order as prayed, the work to be carried out within seven days, defendant to pay costs.

VARIORUM.

"AUDITORS: their Duties and Responsibilities," by Francis W. Pixley (Effingham Wilson), should be read and studied by all who allow themselves to be placed in the position of auditors of joint-stock companies. The way in which the operation of auditing the accounts of public bodies is often performed is worse than farcical,—it is criminal.——"Rules for Engine Drivers," compiled by Mr. M. Powis Bale, M.I.M.E., mounted for suspension (Wyman & Sons), will be found valuable, and should be extensively scattered.——"Fossick's Fifty Years' History of the Iron Trade" (Spon) is shown by a coloured and gilt diagram, and tells in a small space a remarkable story.——*Lloyd's News* has reached its 2,000th number, and its editor, with natural pride, comments on the remarkable course it has run. The circulation is said to be "far above 600,000 per week." "When, after the memorable conflict with the Lords, the paper duty was swept away in 1861, and *Lloyd's* became a penny, further mechanical aid was necessary to print the number required. Improvements in stereotyping at length solved this difficulty; although it was not until the completion of machines perfecting both sides of the paper at once from endless rolls, that the triumph of newspaper printing was reached. The rolls, or reels, prepared for *Lloyd's* contain each ten miles of paper, and as 64 reels are used for each week's circulation, the papers, if placed end to end, would reach 640 miles. It is impossible to say how many miles have been issued during the past two thousand weeks, but a moment's calculation will show that with only the maintenance of the present rate a total of 1,280,000 miles will be reached between this time and the publication of the 4,000th number of *Lloyd's News*."

Miscellanea.

Restorations in France.—The French Government is turning its attention to the preservation of the historical monuments of France. M. Turquet, the under-secretary of the Fine Arts Department, who has particularly distinguished himself by the attention he has paid to this object, proposes this year to expend a sum of 205,000 francs on the restoration of several apartments in the palaces of Fontainebleau and Versailles. He has also proposed a vote of 112,000 francs for the restoration of the celebrated Jeu de Paumes at Versailles. Here it was that the Constituent Assembly sat, at the period of the Great Revolution. The old mural paintings in this hall are to be restored at an expense of 40,000 francs, and the middle of the hall is to be occupied by a statue of Bailly, surrounded by the busts of twenty-one of the principal members of the Constituent Assembly.

Japanese Decorative Art.—On the 15th inst. a paper was read by Mr. J. W. Tonks, at the Queen's College, Birmingham, before the members of the Architectural Association, on the above subject. The lecturer said, at the close of his discourse, that the first strength of the Japanese artist was in his graphic fidelity to nature, his second in his mastery of the art of grouping. His fidelity and mastery of drawing, however, gave the Japanese at last a freedom quite surprising. A few touches would give a mountain, extinct crater at top, with tables of mist surrounding it,—a river meandering through a plain, the motion and repose of water, the murmur of the brook, and the roll of the ocean. The Japanese treatment of birds and animals was remarkable for vitality and action. A border of a large salver in possession of Messrs. Elkington, consisting entirely of flying storks, was cited as an instance; and a symbolic contesting dragon and eagle in centre of same was graphically described, while it was pointed out that all this was still decoration, not painting, no shade being given, and all having a flatness of treatment suitable for that class of art. It was shown that this art resulted from intense and loving study of the objects depicted by even the commonest workmen who took part in the labour; and the lesson of the necessity for a more thorough art education in England was illustrated and enforced. The Japanese chose the plants, flowers, insects, birds, and animals around him for his ornament, and hence in his hands even the flight of a flock of geese became beautified. Finally, Japanese art was largely symbolic, depicting its religious myths, national events, literature, and poetry. The greatest blunder for Europeans, therefore, would be to copy it. We did not want pagan symbols, Japanese history, or Eastern literature. What we did want was the art principles which made its decoration so attractive. We required freedom from mere repetition, yet obedience to the finest laws of harmony. We wanted variety and repose in decoration, the genuine drawing of plants and flowers, the mastery and living display of animal forms in ornament. Lastly, we should employ the forms all around us, learn to use such forms as symbols truly and nobly, and then the study, not the slavish copying of Japanese, would lead us to a great decorative art.

Westminster Abbey.—At a meeting held in the Cloisters, Westminster, on the 18th inst., to consider the proposed transfer of Ashburnham House and its garden (the site of the Abbey refectory) to the governing body of Westminster School,—when there were present Dean Stanley, Lord Wharncliffe, Mr. H. S. Milman (director of the Society of Antiquaries), Messrs. William Morris, F. C. Penrose, Percy Mitford, J. T. Micklethwaite, Arthur T. Bevan, Canons Prothero and Farrar, and many others who take a public interest in the subject,—it was resolved, "That the alienation of the site of the Abbey refectory and Ashburnham House, together with that of the adjoining house and garden, from the Dean and Chapter, in whom they have been vested for eight hundred years, would be an irreparable injury to the Abbey, not only from an architectural and historical, but also from a national, point of view, and this meeting therefore hopes that other means may be found to meet the legitimate requirements of Westminster School." The meeting formed itself into a committee, with power to add to its number, for the purpose of making public the objections to the proposed transfer.

Copyright.—The committee appointed by the Law Amendment Society have drawn up, in the form of a report, a series of recommendations which were adopted by the Council. The Council have resolved to invite subscriptions for the purpose of defraying the costs of drafting and promoting a Bill in accordance with the report. Good progress is now being made, and leave to introduce the Bill, which, in the House of Commons, will be under the charge of Mr. Hastings, M.P., was moved for and obtained on the 15th instant. Subscriptions may be paid to the credit of the "Copyright Fund Account," at Messrs. Ransom, Bouverie, & Co.'s, 1, Pall-mall, East.

The Sunday Society.—Through the liberality of Sir Coutts Lindsay the Grosvenor Gallery has once more been placed at the disposal of the Sunday Society for two Sundays. On Sunday last it was visited by the members of the Society, between the hours of six and half-past eight, and next Sunday the Gallery will be open to the public by free tickets.

The Sphinxes for Cleopatra's Needle.—On Saturday afternoon at the Eccleston Iron Works, Pimlico (Messrs. H. Young & Co.), the process of running the molten metal for one of the colossal bronze sphinxes which are to be placed beside Cleopatra's Needle, on the Victoria Embankment, was gone through. These figures have been designed by Mr. Vulliamy, the architect to the Metropolitan Board, and he has been well seconded by Mr. C. H. Mabey, the sculptor. The final dimensions of each casting will be 19 ft. long by 9 ft. high and 6 ft. wide. The bronze employed for the casting is an alloy consisting of 90 parts of copper to 10 of tin, or ordinary bronze. Of this metal the casting for each sphinx consumes between seven and eight tons, though it will only be half, or at the outside three-quarters, of an inch in thickness. For half an hour the fiery stream poured into the "ladle." The order was then given for transferring the charge to the mould, which had been formed in the back part of the foundry. The figure was cast with its flat horizontal base presented upwards and head downwards, and four "ingates" or entrances had been provided for the molten metal. In the course of a minute or two the ladle had been brought close up to, and slightly higher than, a large iron chest which had been fixed in position above the mould, and which was to receive the metal before it passed on into the mould. The canting of the ladle was readily effected by the aid of a simple appliance, and the metal flowed rapidly into the intermediate receptacle and thence by the ingates into the mould. The actual operation of casting was performed in less than ten minutes.

St. Mary's, Andover.—The large wall-painting just completed by Mr. E. Collier, over the south door of this church, was for the first time exposed to the public gaze on Sunday, the 20th. The painting is in a panel of large dimensions, and represents our Saviour in the attitude of benediction seated on a golden throne, surrounded by angels, two of whom offer incense from swinging censers. The background to the figures, which are nearly life-size, is formed by a Gothic arcading, through which is seen the noonday sky, while the foreground is occupied by a profusion of grasses and flowers. We understand Mr. Collier will now proceed to employ his brush on other portions of the edifice. One of the fifteenth-century monuments which have long been hidden in the tower of this church has been removed to a more suitable position at the side of the chancel, and as soon as the funds will allow the other will follow, and the large five-light window in the clearstory be filled with stained glass.

St. Giles's Cathedral, Edinburgh.—The historical window in the Murray aisle is now completely filled with stained glass, to the memory of the Regent Murray. The form of the window may be described as a triplet of lofty proportions, subdivided by a transom, and terminating in tracery. The Regent on horseback, accompanied by his guard and retinue, passing through the crowded streets of Linlithgow at the moment of the fatal shot by Hamilton of Bothwellhaugh, is the event represented in the three upper compartments of the window, and in the corresponding portions underneath is the impressive scene at the interment of the Regent's body in St. Giles's,—John Knox preaching the funeral sermon before the assembled Scottish nobility and citizens. The designs and execution of the work are by Messrs. Ballantine & Son, to the approval of Mr. Robert Herdman, R.S.A.

Soldering by Electricity.—A recent American patent is a soldering-iron, formed of a handle through which two conductors pass, and project for some distance beyond; between the ends of these is fixed a piece of platinum, which becomes heated on the passage of the electric current. One of the conductors is separated near the upper end of the handle, and bridged by a button made partly of electrical conducting material and partly of insulating material, so that by turning the button the circuit may be completed or broken at will. Another device separates the two halves of the handle, and so the two conductors, by a spring, so that to complete the circuit it is only necessary to close the halves together.—*Electrician.*

Art Union of London.—We are asked to remind our readers that the subscription list of the Art-Union of London will close on the 31st inst., and willingly do so. The print of the year is understood to be very popular, but there are many others from which subscribers can select if preferred.

Sanitary Arrangements of Houses.—The President of the Local Government Board received a deputation on Tuesday afternoon at Whitehall, the purpose of the gentlemen present being to advocate sanitary legislation, by the amendment of the Public Health Acts, and the appointment of qualified inspectors to guarantee by frequent inspection that the sanitary arrangements of every building are constructed and maintained in proper order. Mr. Dodson was accompanied by Mr. J. T. Hibbert, M.P. Colonel Thornycroft stated that several sanitary protection associations had been established. In Wolverhampton they had one on the voluntary system, the payment being 15s. for the first year, and 5s. afterwards, and a person went round to examine the houses, and made a report of what alterations were necessary. They desired to make sanitary inspection compulsory, and that there should be a properly-qualified inspector, to be appointed by Government or by the local authorities. Due time should be given for the carrying out of the alterations deemed necessary. Should the Government take up the movement, one good effect, he hoped, would be the destruction of sewer-gases, and another would be the lowering of the poor-rate. Professor F. Jenkin referred to the progress of the work in Edinburgh. Mr. Hurst Stanger, Wolverhampton, thought that, with reference to inspection, the by-laws should be made compulsory, in which case the inspectors would have to take care that they were carried out efficiently. He should be glad to see the regulation applied to old and new houses. Captain Galton said he had been in America recently, and in New York there existed the power of inspecting every house and requiring traps to be put in proper order. The President of the Local Government Board said that he was summoned to attend a Cabinet Council. He would not, therefore, enter into a detailed statement on the subject, but he would consider the representations which had been made.

Dewsbury.—On Monday a meeting of the Council was held, under the presidency of the Mayor (Alderman W. Machell). A long discussion took place in reference to a recommendation of the General Works Committee to appoint Robert John Duff as borough surveyor and engineer, for the completion of the sewerage works, at a salary of 150*l.* for the first year, 175*l.* for the second, and 200*l.* for the third and subsequent years. An amendment was proposed to defer the appointment for the present, a committee of the whole Council meeting meanwhile to inquire into the duties appertaining to the office, and to consider the applications. The amendment was lost, and the appointment was confirmed.

The Future of Electrical Appliances.—On the 24th inst., Professor John Perry delivered a remarkable lecture on this subject, with many illustrations, at the Society of Arts. His objects were, first, to show what benefits our country would receive from an exact knowledge of electrical powers, and of the fundamental laws of electricity being more widely disseminated; and, secondly, how the principle of recurrent effects may be employed to assist our senses.

Spanish and Portuguese Ornamental Art.—It is proposed by the Lords of the Committee of Council on Education to hold a special loan exhibition of Spanish and Portuguese ornamental art in the South Kensington Museum during the coming summer months. The Committee of Advice has been formed, and the first meeting, at which his Royal Highness Prince Leopold, K.G., presided, took place on Saturday last in the Museum.

The Census.—We have received copies of some documents which have been sent out all over the country to the local officers, in order that they may at once make the necessary arrangements for enumerating every living person in England and Wales on April 4th next. It is an arduous undertaking, and can only be accomplished with the assistance and good-will of the public. This assistance we strenuously invite all our readers to afford in their several positions.

The Presidency of the Institute of Architects.—We have received three or four somewhat violent letters on this subject, concerning which there appears to be a difference of opinion in the body. This difference, however, it seems to us will be best settled by the members themselves, and we therefore refrain from printing the letters.

Haworth Church, Yorkshire, has been further engifted with a stained-glass memorial window, situated at the east end of the south aisle. Of the subjects chosen, each illustrates a prominent event in the lives of the respective chief Apostles of the Jews and Gentiles, SS. Peter and Paul. The first two lights represent St. Peter, accompanied by St. John, healing the lame man at the Beautiful Gate of the Temple to the marvel of the beholders. The groups of the last two lights portray St. Paul preaching at Athens. The tracery lights, having special regard to the dedication of the church, present figures of St. Michael and Angels. The window is by the firm of Powell Brothers, Leeds.

Awards at the Melbourne Exhibition.—Messrs. Thomas Robinson & Son (Limited), of Rochdale, have been awarded three first-class prizes at the Melbourne Exhibition, for woodworking machinery, steam-engines, and boilers; and Messrs. George Wright & Co., of Rotherham and Queen Victoria-street, London, have also obtained a first-class award for stoves, &c.

The Soane Medallion.—The author of the design "Set Square," sent in for the Soane Medallion, and awarded a certificate of merit (alluded to in our last), is Mr. Chas. A. Alexander, of 4, Rue Regnard, Place de l'Odéon, Paris.

Theatre Burning.—The Italian Opera House at Nice, March 23, has been destroyed by fire, the efforts to subdue the flames proving of no avail. It is feared that about one hundred persons have perished in the conflagration.

The Leamington Spa and Municipal Buildings Competition Drawings are on view there, and will be up to the 28th. There are forty in all.

TENDERS

For the construction of 7,300 yards of brick sewers and 13,300 yards of stoneware pipe-sewers, with manholes, flushing valves, lampholes, &c. at Stapleton, near Bristol. Quantities supplied by the engineer, Mr. J. P. Curtis:—

Wilkins & Son, Bristol	£26,800 0 0
Raynor, Bootle, Liverpool	25,550 0 0
Mackay, Hereford	23,400 0 0
Kerby & Hickery, Bristol	23,168 0 0
Thomas & Son, Newport	23,000 0 0
Howell, Bristol	21,500 0 0
Deacon, London	23,000 0 0
McKenzie, London	20,500 0 0
Stevenson, Chesterfield	19,456 0 0
Mereaweather, Bristol	18,600 0 0
Durnford & Son, Totterdown	18,500 0 0
Monks, Fishponds	18,103 0 0
Case & Day, Fishponds	17,723 11 0
Bevan, Bedminster	16,950 0 0
Currall & Lewis, Birmingham	16,326 0 0
Keneday, Westbury	14,835 0 0
Dawson, Bury	14,650 0 0
Neave, London	14,648 0 0
Meredith, Gloucester	14,470 0 0
Yalland, Fishponds (accepted)	13,920 0 0

For new shop-front and alterations to 139, Newington Causeway, for Mr. W. G. Seammen. Mr. George Edwards, architect:—

Colls	£425 0 0
Richardson	375 0 0
Stimpson & Co.	360 0 0
Cullum	337 0 0
Canning & Mullins (accepted)	323 0 0

For alterations to North Gate House, Avenue-road, Regent's Park, for the Rev. H. M. Clifford. Mr. George Edwards, architect:—

Martin, Wells, & Co. (accepted)	£359 0 0

For alteration to 149, High-street, Southampton, for Mr. A. Stedall. Mr. George Edwards, architect:—

Stimpson & Co. (accepted)	£355 0 0

For addition to "Melrose," Clarendon-road, Georgelane, Woodford, for Mr. E. Nicholson. Mr. C. A. Legg, architect. Quantities by Mr. W. Hawker.

Alp	£497 0 0
North, Bros.	483 0 0
Wood	393 0 0
England & Thompson (accepted)	390 0 0

For new premises, Nos. 122, 123, and 124, Pall-mall, London, for the Life Association of Scotland. Mr. Alexander Peebles, architect:—

	Contract No. 1.	New Vaults. Extra.	Sub-Basement. Extra.
Fish	£22,302	£560	£2,080
Clarke & Bracey	21,540	463	1,590
Trollope & Sons	21,538	477	1,995
Perry & Co.	21,486	387	1,889
Colls & Sons	20,921	668	2,036
Conder	20,475	595	1,950
Ashby Brothers	20,180	518	1,450
Holland & Hannen	20,106	506	1,420
Brass	19,920	534	1,892
Ashby & Horner	19,840	510	1,690
Lawrence	19,576	486	1,240
Morter*	19,313	511	1,547

* Accepted without the sub-basement.

For the construction of a 2-ft. pipe outfall sewer, sluice chamber, principal bench carriers, &c., for the Wasley main drainage, on the Barton Old Hall Sewage Farm, for the Barton Rural Sanitary Authority. Quantities supplied by the engineer, Mr. John Price:—

Snape & Son, of Eccles	£201 13 8
Williams, Chester	163 19 0
Turner & Sons, Warrington (accepted)	137 0 2

For works of two houses, Prince's-road, Great Yarmouth, for Mr. C. Diver. Mr. J. W. Cockrill, architect.

For all Trades.

Isaacs, Great Yarmouth	£1,750 0 0
Bray	1,597 0 0

Bricklayer, Carpenter, Plasterer, Mason, and Slater's Work.

Poxon, Great Yarmouth	£1,725 0 0
Want, Great Yarmouth	1,631 0 0
Salmon, Great Yarmouth	1,571 0 0
Beech & Cork, Great Yarmouth	1,561 0 0
Bray, Great Yarmouth	1,447 0 0
Harboard & Isaacs, Caister, Great Yarmouth (accepted)	1,359 10 0

Painter, Plumber, and Glazier's Work.

Norman & Sons, Great Yarmouth	£144 0 0
Read, Gorleston	128 10 0
Platt, Great Yarmouth (accepted)	120 0 0

Bells and Gasfittings.

Barge & Freeman, Great Yarmouth	£24 0 0
Gray & Palmer, Great Yarmouth	19 0 0
Atkins, Great Yarmouth (accepted)	12 0 0

For alterations to Ivy House, Southtown, for Mrs. Todd. Mr. J. W. Cockrill, architect:—

Salmon, Great Yarmouth	£246 0 0
Want, Great Yarmouth	243 0 0
Springall, Great Yarmouth	239 0 0
Kemp, Gorleston, Great Yarmouth, (accepted)	226 5 0

For erection of bark-shed, &c., stores, chimney, &c., Burton-on-Trent. Messrs. William Sugden & Son, architects. Quantities by the architects:—

Sugden Chamberlain Brothers Pickering Brothers Buxton & Thornley	£2,344 17 0

For additions and alterations to the West-street Sunday and Day-School Premises, Leek. Messrs. William Sugden & Son, architects. Quantities by the architects:—

Bromage Stevenson	£1,275 0 0

For alterations and extensions of St. Edward's School, Mill-street, Leek. Messrs. William Sugden & Son, architects. Quantities by the architects:—

Knowles Mackrell Phillips	£1,203 1 0

For erecting new public offices, surveyor's residence, fire station, &c., in Milton-road, South Hornsey, for the South Hornsey Local Board. Mr. Edward Fry, architect:—

		Allow for old materials.
Revell	£6,250 0 0	£50 0 0
Ward & Co.	6,775 0 0	110 0 0
Harper	5,975 0 0	150 0 0
Sharp & Mills	5,965 0 0	175 0 0
Crabb	5,446 0 0	100 0 0
Goodall	5,377 0 0	200 0 0

For additions to a house at Grundisburgh, for Captain H. L. Round-Turner, R.N. Mr. H. M. Eyton, architect. Quantities supplied:—

Saunders & Son, Dedham	£418 0 0
Dove, Woodbridge	383 10 0
Graystone, Ipswich	375 0 0
Smith (accepted)	373 7 0

For additions to St. Saviour's Wharf, Dockhead, for Mr. Seth Taylor. Messrs. Snook & Stock, architects:—

Rider	£4,035 0 0
Wells	3,984 0 0
Marsland	3,912 0 0
J. & J. Greenwood	3,697 0 0
Holland & Hannen	3,573 0 0

For taking down and part re-building the Duke of Wellington, Shadwell, E., for Mr. Schofield. Mr. W. H. Williams, architect.

Royal (accepted).

For taking down and re-building Nos. 1 and 2, Chapel-street, Somers Town, for Mr. Jones. Messrs. Saville & Son, architects:—

Emery	£1,350 0 0
Temple & Forster	1,290 0 0
Cave	1,250 0 0
Hawkins	1,099 0 0
Beal	1,040 0 0
Wall Brothers	998 0 0
Anley	980 0 0
Royal (accepted)	966 0 0

For alterations and repairs at the Prince Arthur, Stamford-street, Blackfriars. Mr. W. H. Williams, architect:—

Mills	£235 0 0
Mason	207 0 0
Royal (accepted)	182 0 0

For building block of Model Dwellings, Brewery-road, N., for Mr. J. Hickson. Mr. N. E. Pickering, architect:—

Royal (accepted)	£2,840 0 0

For the extension of Portsmouth and Cosham Tramways, for the Provincial Tramways Company, Limited. Messrs. Davis & Emanuel, engineers. Quantities by Mr. John Glenn:—

Nowell & Robson, London	£7,747 0 0
Quick, Portsmouth	7,670 0 0
Bramble Brothers, Portsea	7,515 0 0
W. R. & C. Light, Portsmouth	7,447 0 0
Griffiths, London	7,125 0 0
Cooper, Portsmouth	6,941 0 0
Bevis	6,747 4 7
Ward	6,672 0 0
Hill, Gosport	6,600 0 0
Sheppard, London	5,542 0 0
Hayter, Portsmouth	5,490 0 0
Leather	4,840 0 0

For additional nurses' apartments at the Holborn Union Infirmary, Highgate. Messrs. H. Saxon Snell & Son, architects:—

Howard	£2,350	0	0
Bamford	2,275	0	0
Mowlem & Co.	2,246	0	0
Wall Brothers	2,190	0	0
Crockett (accepted)	2,059	0	0
Garrud	1,937	0	0

For taking down and re-building 71, Charlotte-street, Fitzroy-square, for Mr. Dobbs. Mr. C. Stanger, architect:—

Grover	£1,688	0	0
Conder	1,666	0	0
Downs	1,650	0	0
Taylor & Parfitt (accepted)	1,439	0	0
Sabey & Sons	1,400	0	0

For building detached residence, Junction-road, Romford, Essex, for Mr. J. Mauttan. Mr. J. William Stevens, architect. Quantities supplied:—

Dousing	£1,050	0	0
Frost & Co.	1,042	0	0
Hamblin	957	0	0
Davey	940	0	0
Holland	845	0	0
Boyd	825	0	0
Wood	815	0	0
Barrett	800	0	0
Beale	796	0	0
Mews	738	0	0
Ayr	570	0	0

For the erection of stabling, letter-sorters' room, and cottage, in Ridsdale-road, Anerley, for Mr. Walker Smith, of the Co-operative Stores, Anerley. Mr. C. J. C. Pawley, architect:—

Spicer, Anerley	£1,475	0	0
Smith & Son, South Norwood	1,215	0	0
Masters, Anerley	1,205	0	0
Hollidge & Stuart, South Norwood	1,110	0	0
Turtle & Appleton, New Wandsworth (accepted)	1,095	0	0
Ockenden, Anerley	931	0	0

For a detached house, on the Crow-hill Estate, Mansfield, for Mr. T. Buxton. Mr. Thomas Hartas, architect. Quantities by Mr. J. H. Stone:—

Vallance & Son	£1,370	0	0
Greenwood	1,300	0	0
Parsons & Stevenson	1,229	8	6
Sills	1,215	0	0
Parsons	1,210	0	0
Hind	1,207	0	0
Vallance	1,178	0	0
Alsop	1,163	9	9
Fisher (accepted)	1,110	0	0
Young	1,095	0	0

For additions, &c., to new meeting-room at St. Barnabas Church, Harriett-road, Holloway. Mr. T. K. Green, architect.

Niblett (accepted).

For alterations for Messrs. Drake & Jones, of 228 and 300, Edgware-road:—

Mark	£223	0	0
French	217	10	0
Eccles	217	0	0

For additions to the Swan Hotel, Tunbridge Wells, for Mrs. Semark. Messrs. Cross & Wells, architects.

Strange & Sons (accepted)	£2,031	0	0

For the erection of Thames View House, St. Margaret's-road, Twickenham, for Mrs. Foster. Mr. W. S. Witherington, architect:—

Lucas, Richmond	£2,787	13	6
Russell, Hackney	2,297	0	0
Taylor & Parfitt, Haggerstone	2,079	0	0
Coney, Liverpool-road, N.	1,845	0	0

For fitting up a bank at Finsbury Park Branch of the London and South Western Bank. Mr. George Truefitt, architect:—

Stuart	£560	0	0
Smith	475	0	0
Ellis (accepted)	433	0	0

For new premises, south-west corner of North Front and St. Mary's-street, Southampton. Mr. Arthur Martin, architect:—

Rowland (accepted)	£316	15	0

For proposed dwellings for the Broad-street Station Dwellings Company, Limited. Mr. E. T. Hall, architect:—

Patrick	£35,312	0	0
Longmire & Burge	34,300	0	0
Adamson	33,700	0	0
Bray	33,350	0	0
Greenwood (accepted)	32,800	0	0

For re-building the Adam and Eve Public-house, York-street, Westminster, for Messrs. Watney & Co. Mr. C. W. Bovis, architect. Quantities supplied by Mr. T. M. Hawkins:—

Lamble	£2,327	0	0
Grant	2,293	0	0
Spencer & Co.	2,289	0	0
Anley	2,270	0	0
Taylor	2,137	0	0
Beale	1,998	0	0

For the erection of a Board School and Teachers' Residence, at St. George's-super-Ely, Glamorgan. Messrs. Blessley & Vaughan, architects. Quantities by the architects:—

Shepton, Cardiff	£1,509	0	0 !
Howell & Son, Bristol	1,399	0	0
Jones Brothers, Cardiff	1,330	0	0
Dunn, Cardiff	1,328	7	6
Gough, Cardiff	1,311	0	0
Veal, Bristol	1,254	0	0
James & Son, Bridgend	1,164	0	0
Thomas, Cardiff	1,150	0	0
Thomas, Llantrissant	738	0	0
Williams & Miller, Dynas	689	10	0 !

TO CORRESPONDENTS.

Liverpool (an architect who informs us that so soon as his drawing is ready it shall be forwarded to us for publication, and then sends it to another paper for that purpose instead, must excuse us for regarding him as not to be trusted. We should expect, in fact, to find him, on any other occasion, a re-lie-able person).

Ventilation, Warming, and Boiler Explosions.—A number of letters on these subjects are under consideration.

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